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THE WOOSTER ARITHMETIC GRADE II

CRANE & COMPANY
PUBLISHERS
TOPEKA, KANSAS

IN MEMORIAM
BERNARD MOSES

THE

WOOSTER ARITHMETIC

FOR

GRADE II

By LIZZIE E. WOOSTER

CRANE & COMPANY, PUBLISHERS
TOPEKA, KANSAS
1900

QA102
W83
v.2

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BERNARD MOSES

FOR THE TEACHER.

This book is for the use of pupils in the Second Grade or Second School Year. It is based upon the same principles as the book for Grade I, and the same careful gradation is followed.

The book is divided into three sections and the lessons numbered; and each may be used as a lesson or not, as the needs of the class demand.

The first section is given to a review of the book for Grade I, with advanced work.

This book contains the numbers from 1 to 100 in Addition, Subtraction, Multiplication, and Division, with work to 999 in simple addition and subtraction and in reading and writing numbers.

The work is so arranged that the pupils grasp it readily, and can with but little aid from the teacher prepare their work on slates or paper at their seats, for the recitation. Thereby concentration of thought is cultivated,—independence, and self-confidence.

The strain on the eyes is lessened, as they are not dependent upon the blackboard for all the seat work. Time for the teacher has been saved, and she can assign as much work as the pupils can learn, and is not dependent upon the amount of blackboard space she has.

As has been said elsewhere, too much blackboard work is a detriment to both pupils and teacher.

Use objects for illustrating, but discontinue their use as soon as the pupils thoroughly understand the work. *Study* the *needs* of the children, and arrange the work to *suit them.*

The great variety of work given prevents the children from tiring, and gives the practice necessary to secure accuracy and rapidity. Encourage the children to give original problems for use in the recitation. Such work helps to fix ideas and principles in their minds, and also gives the teacher a better understanding of the children's needs.

Make all work practical, and show that it has to do with the *real affairs of life.*

If time permits, the teacher should give during the recitations some such work as is found on pages 10, 14, 20, 59, 70, 73, 88, etc.

Cards, tablets and the blackboard may be used in oral work, to gain rapid recognition of numbers.

Teach *how to study*, and help the children to develop reasoning power.

The children should thoroughly learn the *tables* and the few *definitions* given in this book. Some children never attend school after the second year, and if they thoroughly master the work in this book they will be able to understandingly meet some of the little problems in every-day life.

LIZZIE E. WOOSTER.

885999

CONTENTS.

NUMBERS FROM 1 TO 999. IN ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION TO 100. IN READING AND WRITING NUMBERS, AND IN ADDITION AND SUBTRACTION, TO 999.

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SECTION I.

REVIEW IN ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION FROM 1 TO 20, WITH ADVANCED WORK.

LESSON I.

COPY AND ADD.

1 hen	2 boys	1 hat	2 caps	3 bats
1 hen	1 boy	2 hats	2 caps	1 bat
1 ball	4 cats	3 rats	1 fly	2 pens
3 balls	1 cat	2 rats	4 flies	3 pens
5 cans	4 pins	3 dogs	1 pig	2 fish
1 can	2 pins	3 dogs	5 pigs	4 fish

6	5	4	1	2	3	7	6	5	4
1	2	3	6	5	4	1	2	3	4
1	2	3	8	7	6	5	1	2	3
7	6	5	1	2	3	4	8	7	6
4	9	8	7	6	5	4	3	2	1
5	1	2	3	4	5	6	7	8	9

NOTE.—Add at sight for all oral work, that the pupils may learn the combinations and gain rapidity.

COPY AND COMPLETE.

2 boys and 2 boys are 4 boys.
3 girls and 1 girl are 4 girls.
2 hens and 3 hens are 5 hens.
4 cows and 1 cow are 5 cows.
3 cents and 2 cents are 5 cents.
1 owl and 4 owls are —— owls.
3 tops and 3 tops are —— tops.
4 pens and 2 pens are —— pens.
5 books and 1 book are —— books.
2 slates and 4 slates are —— slates.
1 card and 5 cards are —— cards.
6 sleds and 1 sled are —— sleds.
5 tubs and 2 tubs are —— tubs.
4 men and 3 men are —— men.
1 bird and 6 birds are —— birds.
2 cats and 5 cats are —— cats.
3 pigs and 4 pigs are —— pigs.
7 wagons and 1 wagon are —— wagons.
6 horses and 2 horses are —— horses.
5 mules and 3 mules are —— mules.
4 sheep and 4 sheep are —— sheep.
1 ball and 7 balls are —— balls.
2 bats and 6 bats are —— bats.

NOTE.— Pupils should read the above orally during the recitation, filling the blanks as they read.

COPY AND ADD.

1 + 1 =	4 + 1 =	4 + 2 =	5 + 2 =
2 + 1 =	3 + 2 =	3 + 3 =	4 + 3 =
1 + 2 =	1 + 4 =	2 + 4 =	1 + 6 =
3 + 1 =	2 + 3 =	1 + 5 =	2 + 5 =
1 + 3 =	5 + 1 =	6 + 1 =	3 + 4 =
7 + 1 =	3 + 5 =	2 + 7 =	6 + 4 =
6 + 2 =	8 + 1 =	3 + 6 =	5 + 5 =
5 + 3 =	7 + 2 =	4 + 5 =	1 + 9 =
4 + 4 =	6 + 3 =	9 + 1 =	2 + 8 =
1 + 7 =	5 + 4 =	8 + 2 =	3 + 7 =
2 + 6 =	1 + 8 =	7 + 3 =	4 + 6 =

1	1	2	1	2	2	1	3	2	1
1	2	1	1	2	1	2	1	3	3
1	1	1	2	1	2	2	1	1	1
3	1	3	1	2	2	1	4	5	1
1	1	2	3	1	3	2	1	0	4
2	3	1	2	3	1	3	1	1	1
1	2	5	4	3	2	2	4	5	6
1	2	1	2	2	1	4	1	1	1
4	2	0	1	2	4	1	2	1	0
4	3	4	2	1	3	3	3	1	4
2	3	4	2	7	2	3	2	1	2
2	3	2	2	1	3	0	4	1	3
3	1	0	2	1	2	2	1	1	1

The sign of **addition,** +, is called *plus.*
The sign of **equality,** =, is called *equal* or *equals.*

1 flag + 1 flag = ____ flags.
2 drums + 3 drums = ____ drums.
8 apples + 1 apple = ____ apples.
7 oranges + 2 oranges = ____ oranges.
6 nuts + 3 nuts = ____ nuts.
5 beans + 4 beans = ____ beans.
1 potato + 8 potatoes = ____ potatoes.
2 beets + 7 beets = ____ beets.
3 melons + 6 melons = ____ melons.
4 turnips + 5 turnips = ____ turnips.
9 flowers + 1 flower = ____ flowers.
8 pumpkins + 2 pumpkins = ____ pumpkins.
7 leaves + 3 leaves = ____ leaves.
6 baskets + 4 baskets = ____ baskets.
5 rakes + 5 rakes = ____ rakes.
1 hoe + 9 hoes = ____ hoes.
2 bees + 8 bees = ____ bees.
3 clocks + 7 clocks = ____ clocks.
4 windows + 6 windows = ____ windows.

NOTE.—All the blank work given should be read orally by the pupils during the recitation, and blanks filled as they read. It will help to gain accurate and rapid work in learning the combinations.

COPY AND ADD.

1	3	6	1	3	1	2	3	2	4
1	3	1	6	3	1	3	2	4	2
5	1	1	1	2	6	3	3	2	2

2	2	5	2	1	2	4	0	2	7
2	4	1	5	2	1	0	6	0	1
4	2	2	1	5	5	4	2	6	0

3	6	1	2	6	2	7	4	8	1
3	1	2	1	2	6	1	3	0	8
3	2	6	6	1	1	1	2	1	0

3	2	1	4	1	1	4	6	7	5
4	3	1	4	7	4	1	3	0	4
2	4	7	1	1	4	4	0	2	0

9	6	4	2	1	2	2	4	6	1
0	2	4	2	0	6	4	2	3	3
1	2	2	6	9	2	4	4	1	6

3	5	7	8	1	2	1	1	7	1
6	5	2	1	2	7	8	1	1	7
1	0	1	1	7	1	1	8	2	2

Count to 100. Write to 50.

Read the numbers backward from 100 to 0.

In 4 there are —— twos.
In 6 there are —— threes.
In 6 there are —— twos.
In 8 there are —— fours.
In 8 there are —— twos.
In 9 there are —— threes.
In 10 there are —— twos.
In 10 there are —— fives.

1. If Nell had 3 dolls and her mother gave her 2 more, how many would she have?

2. If John had 4 books and his papa gave him 3 more, how many would he have?

3. George had 5 marbles and he bought 3 more; how many did he then have?

4. Mary had 6 paper dolls and she made 3 more; how many did she then have?

5. Ann had 2 pencils and she bought 6 more; how many did she then have?

6. If Frank had 5 eggs in his basket and put 5 more in, how many would he then have in his basket?

7. May had 8 cents and her papa gave her 2 more; how many did she then have?

NOTE.—Much oral work such as is on this page should be given by the teacher each day, if possible. Use the children's names and the names of familiar objects for the work.

0	10	20	30	40	50	60	70	80	90
1	11	21	31	41	51	61	71	81	91
2	12	22	32	42	52	62	72	82	92
3	13	23	33	43	53	63	73	83	93
4	14	24	34	44	54	64	74	84	94
5	15	25	35	45	55	65	75	85	95
6	16	26	36	46	56	66	76	86	96
7	17	27	37	47	57	67	77	87	97
8	18	28	38	48	58	68	78	88	98
9	19	29	39	49	59	69	79	89	99

100	110	120	130	140	150	160	170	180	190
101	111	121	131	141	151	161	171	181	191
102	112	122	132	142	152	162	172	182	192
103	113	123	133	143	153	163	173	183	193
104	114	124	134	144	154	164	174	184	194
105	115	125	135	145	155	165	175	185	195
106	116	126	136	146	156	166	176	186	196
107	117	127	137	147	157	167	177	187	197
108	118	128	138	148	158	168	178	188	198
109	119	129	139	149	159	169	179	189	199

NOTE.—To be used as a help in the drill work for teaching the children to read and write any hundreds. The *0* should be called *naught*. 102, 137, etc., should be read one hundred two, one hundred thirty-seven, etc. Do not permit the children to use the word *and* between the numbers.

ADD.

1	2	3	1	2	1	1	2	1	1
1	2	3	1	1	3	1	2	1	2
1	2	1	2	2	1	3	1	4	3
1	2	1	2	1	3	3	1	4	1

4	3	2	3	2	2	4	3	2	4
4	1	2	1	4	3	3	3	4	1
1	2	4	4	2	1	2	1	1	4
1	1	2	1	2	1	1	1	3	1

6	1	3	0	8	3	2	3	1	9
1	7	4	5	1	3	5	2	5	0
1	1	2	0	1	2	2	3	2	1
1	1	1	5	0	2	1	2	2	0

1	2	4	2	1	3	1	2	4	3
1	2	4	2	3	1	2	3	2	3
1	2	0	3	3	2	1	2	1	3
1	2	1	1	2	1	3	1	1	0
1	2	1	2	1	3	1	1	2	1

In 8 there are __ threes and __ left over.
In 9 there are __ twos and __ left over.
In 7 there are __ threes and __ left over.
In 9 there are __ fours and __ left over.

1 + 1 + 1 =	2 + 1 + 2 =	6 + 3 + 1 =
2 + 2 + 2 =	3 + 2 + 1 =	1 + 4 + 3 =
3 + 3 + 3 =	4 + 3 + 3 =	8 + 1 + 1 =
4 + 4 + 2 =	7 + 1 + 1 =	3 + 4 + 2 =
2 + 3 + 5 =	1 + 5 + 2 =	8 + 0 + 1 =
1 + 4 + 1 =	3 + 4 + 1 =	9 + 1 + 0 =
3 + 2 + 2 =	6 + 1 + 2 =	2 + 3 + 3 =
2 + 4 + 1 =	2 + 7 + 1 =	4 + 2 + 4 =

Count by 2's to 10. Write to 100.

2 girls have —— hands.
3 boys have —— eyes.
4 men have —— feet.
5 birds have —— eyes.
4 horses have —— ears.
2 cows have —— feet.
5 hens have —— wings.
2 dogs have —— feet.
4 cats have —— eyes.
5 cows have —— ears.
3 rabbits have —— eyes.
2 rabbits have —— feet.
5 owls have —— wings.
4 ducks have —— feet.
2 horses have —— feet.
5 ducks have —— eyes.

1. If Mary had 5 dolls and Santa Claus gave her 5 more, how many would she have?

2. If Fred had 9 marbles and his mamma gave him 1 more, how many would he have?

3. Rose had 6 dresses and her mother gave her 3 more; how many did she then have?

4. Tom had 7 hens and he bought 3 more; how many did he then have?

5. Grace had 4 books and she bought 3 more; how many did she then have?

6. Harry had 3 pet chickens and he bought 7 more; how many did he then have?

7. Edith had 5 aprons and her mother made her 3 more; how many did she then have?

8. Frank had 7 pencils and he bought 2 more; how many did he then have?

9. There were 6 eggs in one nest and 4 in another nest; how many in both?

10. There were 5 pencils in one box and 4 in another box; how many in both?

11. Nat had 9 apples and he found 1 more; how many did he then have?

The sign of **subtraction,** −, is called *minus.*

4 pencils − 1 pencil leaves —— ——.
3 marbles − 3 marbles leaves —— ——.
5 ducks − 3 ducks leaves —— ——.
6 birds − 1 bird leaves —— ——.
8 hens − 6 hens leaves —— ——.
7 blocks − 4 blocks leaves —— ——.
6 pins − 2 pins leaves —— ——.
8 apples − 5 apples leaves —— ——.

2 boxes; take away 1 box, leaves —— ——.
3 hats; take away 2 hats, leaves —— ——.
4 clocks; take away 3 clocks, leaves —— ——.
4 bells; take away 2 bells, leaves —— ——.
5 sleds; take away 4 sleds, leaves —— ——.
6 balls; take away 3 balls, leaves —— ——.
5 caps; take away 2 caps, leaves —— ——.
7 sticks; take away 5 sticks, leaves —— ——.
6 bats; take away 2 bats, leaves —— ——.
7 tops; take away 4 tops, leaves —— ——.
6 cards; take away 5 cards, leaves —— ——.
7 beans; take away 3 beans, leaves —— ——.
6 hens; take away 4 hens, leaves —— ——.
8 eggs; take away 2 eggs, leaves —— ——.
7 cans; take away 6 cans, leaves —— ——.

SUBTRACT.

8 men	7 boys	8 girls	8 owls
−4 men	5 boys	5 girls	3 owls
7 beans	8 beets	7 cakes	8 bees
−2 beans	1 beet	7 cakes	2 bees
8 knives	9 hoes	8 rakes	9 spades
−8 knives	6 hoes	1 rake	2 spades
10 balls	10 cows	9 sheep	10 hens
−8 balls	5 cows	3 sheep	6 hens

2	2	1	3	3	3	3	4	4
−1	2	1	1	2	3	0	2	1
4	4	5	5	5	5	5	5	6
−3	4	1	3	4	2	5	0	1
6	6	6	6	6	6	7	7	7
−2	3	4	5	6	0	1	2	3
7	7	7	7	7	7	8	8	8
−4	5	6	7	7	0	1	2	3

Count to 100. Write to 100.

SUBTRACT.

8	8	8	8	8	8	9	9	9
− 4	5	6	7	8	0	1	2	3
9	9	9	9	9	9	9	10	10
− 4	5	6	7	8	9	0	1	2
10	10	10	10	10	10	10	10	10
− 3	4	5	6	7	8	9	10	0

1 − 1 =	3 − 3 =	5 − 3 =	6 − 5 =
1 − 0 =	4 − 1 =	5 − 4 =	6 − 6 =
2 − 1 =	4 − 2 =	5 − 5 =	7 − 1 =
2 − 2 =	4 − 3 =	6 − 1 =	7 − 2 =
2 − 0 =	4 − 4 =	6 − 2 =	7 − 3 =
3 − 1 =	5 − 1 =	6 − 3 =	7 − 4 =
3 − 2 =	5 − 2 =	6 − 4 =	7 − 5 =
7 − 6 =	8 − 6 =	9 − 5 =	10 − 3 =
7 − 7 =	8 − 7 =	9 − 6 =	10 − 4 =
8 − 1 =	8 − 8 =	9 − 7 =	10 − 5 =
8 − 2 =	9 − 1 =	9 − 8 =	10 − 6 =
8 − 3 =	9 − 2 =	9 − 9 =	10 − 7 =
8 − 4 =	9 − 3 =	10 − 1 =	10 − 8 =
8 − 5 =	9 − 4 =	10 − 2 =	10 − 9 =

Add all the numbers together that will make 6, 7, 8, 9, 10.

Subtract all the numbers you can from 6, 7, 8, 9, 10.

8 cups; take away 3 cups, leaves —— ——.
9 pans; take away 7 pans, leaves —— ——.
10 bees; take away 3 bees, leaves —— ——.

8 butterflies less 5 butterflies are —— ——.
10 flowers less 2 flowers are —— ——.
9 chickens less 2 chickens are —— ——.
8 rabbits less 3 rabbits are —— ——.
7 pumpkins less 5 pumpkins are —— ——.
10 melons less 7 melons are —— ——.
9 potatoes less 4 potatoes are —— ——.
10 turnips less 6 turnips are —— ——.
9 baskets less 3 baskets are —— ——.
10 oranges less 4 oranges are —— ——.

10 flags — 7 flags leaves —— ——.
9 cards — 6 cards leaves —— ——.
10 cents — 5 cents leaves —— ——.
8 boats — 3 boats leaves —— ——.
10 nuts — 8 nuts leaves —— ——.
10 pins — 9 pins leaves —— ——.
9 bats — 8 bats leaves —— ——.
10 pens — 10 pens leaves —— ——.
9 eggs — 1 egg leaves —— ——.
10 hats — 1 hat leaves —— ——.

I = 1	XI = 11	XXI = 21	XXXI = 31
II = 2	XII = 12	XXII = 22	XXXII = 32
III = 3	XIII = 13	XXIII = 23	XXXIII = 33
IV = 4	XIV = 14	XXIV = 24	XXXIV = 34
V = 5	XV = 15	XXV = 25	XXXV = 35
VI = 6	XVI = 16	XXVI = 26	XXXVI = 36
VII = 7	XVII = 17	XXVII = 27	XXXVII = 37
VIII = 8	XVIII = 18	XXVIII = 28	XXXVIII = 38
IX = 9	XIX = 19	XXIX = 29	XXXIX = 39
X = 10	XX = 20	XXX = 30	XL = 40

XLI = 41	LI = 51	LXI = 61	LXXI = 71
XLII = 42	LII = 52	LXII = 62	LXXII = 72
XLIII = 43	LIII = 53	LXIII = 63	LXXIII = 73
XLIV = 44	LIV = 54	LXIV = 64	LXXIV = 74
XLV = 45	LV = 55	LXV = 65	LXXV = 75
XLVI = 46	LVI = 56	LXVI = 66	LXXVI = 76
XLVII = 47	LVII = 57	LXVII = 67	LXXVII = 77
XLVIII = 48	LVIII = 58	LXVIII = 68	LXXVIII = 78
XLIX = 49	LIX = 59	LXIX = 69	LXXIX = 79
L = 50	LX = 60	LXX = 70	LXXX = 80

NOTE.—To be used when best suited to the needs of the class. The Romans should be taught in advance of those that occur in the reading lessons, that the children may give the page and lesson without hesitation when using their readers. The children should be taught the Romans sufficiently to use them wherever they occur in their text-books.

1. George had 7 apples and he ate 2; how many had he left?

2. Julia had 8 books and she gave 3 to Grace; how many had she left?

3. Henry had 10 marbles and he lost 4; how many had he left?

4. Ella had 9 cards and she gave 2 away; how many had she left?

5. James had 10 chickens and he sold 6; how many had he left?

6. If a man had 8 cows and 2 died, how many would he have left?

7. Kate had 10 cents and she spent 5; how much had she left?

8. John had 8 pencils and he gave Nat 1; how many had he left?

9. May had 10 eggs in her basket and she lost 3; how many had she left?

10. Willie had 9 pet rabbits and 3 ran away; how many were left?

11. Edith had 7 dolls and she gave 3 away; how many did she have left?

12. Dan had 10 ducks and he sold 7; how many had he left?

13. Grace had 10 cents and she spent 7; how much had she left?

ADD.

10	9	8	7	6	5	4	3	2
1	2	3	4	5	6	7	8	9
1	11	10	9	8	7	6	5	4
10	1	2	3	4	5	6	7	8
3	2	1	7	3	9	8	9	7
9	10	11	4	8	2	4	3	5

SUBTRACT.

11	11	11	11	11	11	11	11	11
1	2	3	4	5	6	7	8	9
11	11	11	12	12	12	12	12	12
10	11	0	1	2	3	4	5	6
12	12	12	12	12	12	10	11	12
7	8	9	10	11	12	7	8	3

10 + 1 =	4 + 7 =	9 + 3 =	3 + 9 =
9 + 2 =	3 + 8 =	8 + 4 =	2 + 10 =
8 + 3 =	2 + 9 =	7 + 5 =	1 + 11 =
7 + 4 =	1 + 10 =	6 + 6 =	11 − 1 =
6 + 5 =	11 + 1 =	5 + 7 =	11 − 2 =
5 + 6 =	10 + 2 =	4 + 8 =	11 − 3 =

11 men − 7 men leaves —— ——.

12 slates − 8 slates leaves —— ——.

ADD.

12	11	10	9	8	7	6	5	4
1	2	3	4	5	6	7	8	9
3	2	1	13	12	11	10	9	8
10	11	12	1	2	3	4	5	6
7	6	5	4	3	2	1	8	9
7	8	9	10	11	12	13	5	4

SUBTRACT.

13	13	13	13	13	13	13	13	13
1	2	3	4	5	6	7	8	9
13	13	13	13	14	14	14	14	14
10	11	12	13	1	2	3	4	5
14	14	14	14	14	14	14	14	14
6	7	8	9	10	11	12	13	14

12 + 1 =	6 + 7 =	13 + 1 =	7 + 7 =
11 + 2 =	5 + 8 =	12 + 2 =	6 + 8 =
10 + 3 =	4 + 9 =	11 + 3 =	5 + 9 =
9 + 4 =	3 + 10 =	10 + 4 =	4 + 10 =
8 + 5 =	2 + 11 =	9 + 5 =	3 + 11 =
7 + 6 =	1 + 12 =	8 + 6 =	2 + 12 =

3 + 3 + 3 + 3 = 4 + 2 + 2 + 4 =

2 + 2 + 2 + 2 = 3 + 3 + 6 + 0 =

TO BE READ.

18	92	16	28	10	106	20	11
26	79	100	15	110	116	12	117
37	85	72	83	9	160	19	99
73	96	104	32	88	66	90	109
62	53	95	47	56	108	119	19
25	42	101	62	118	18	30	180
17	75	110	97	18	83	13	79
65	48	80	117	80	86	73	162
78	57	109	54	70	68	133	26
86	98	27	116	17	120	77	178

11 − 1 =	11 − 7 =	12 − 2 =	12 − 8 =
11 − 2 =	11 − 8 =	12 − 3 =	12 − 9 =
11 − 3 =	11 − 9 =	12 − 4 =	12 − 10 =
11 − 4 =	11 − 10 =	12 − 5 =	12 − 11 =
11 − 5 =	11 − 11 =	12 − 6 =	12 − 12 =
11 − 6 =	12 − 1 =	12 − 7 =	13 − 1 =
13 − 2 =	13 − 9 =	14 − 3 =	14 − 10 =
13 − 3 =	13 − 10 =	14 − 4 =	14 − 11 =
13 − 4 =	13 − 11 =	14 − 5 =	14 − 12 =
13 − 5 =	13 − 12 =	14 − 6 =	14 − 13 =
13 − 6 =	13 − 13 =	14 − 7 =	14 − 14 =
13 − 7 =	14 − 1 =	14 − 8 =	1 + 13 =
13 − 8 =	14 − 2 =	14 − 9 =	10 + 4 =

Write to 100. Count by 2's to 50.

NOTE.—Give drill work from the blackboard in reading and writing numbers.

1. James had 6 hens and he bought 6 more; how many did he then have?

2. Edith had 8 books and her papa gave her 5 more; how many did she then have?

3. George had 9 marbles and he bought 5 more; how many did he then have?

4. Ruth had 11 cents and she spent 6 for candy; how much had she left?

5. Charles had 14 ducks and he sold 8; how many had he left?

6. Ella found 7 eggs in one nest and 4 in another nest; how many eggs did she find in both?

7. Dan had 13 marbles and he lost 7; how many did he have left?

8. Alice had 11 sticks of candy and she gave 5 to Ella; how many had she left?

9. Paul had 12 apples and he gave 4 to Dan; how many had he left?

10. Walter had 14 chickens and he sold 12; how many had he left?

ADD.

8	6	4	7	9	6	3	4	5	1
2	1	4	2	1	6	3	4	5	2
3	1	2	3	1	1	3	4	2	3
+1	5	3	4	2	1	3	2	2	7

The sign of **multiplication,** ×, means *multiply*, and is called *times.*

2 times 1 hat are —— hats.
2 times 2 caps are —— caps.
2 times 3 slates are —— slates.
2 times 4 tops are —— tops.
2 times 5 pens are —— pens.
2 times 6 balls are —— balls.
3 times 2 books are —— books.

2 × 7 sleds are —— sleds.
3 × 2 cups are —— cups.
4 × 2 cans are —— cans.
5 × 2 pencils are —— pencils.
6 × 2 cards are —— cards.
3 × 4 bats are —— bats.

MULTIPLY.

2 bees	3 dolls	2 fans	2 pins	4 hats
×2	2	3	1	2
4 tops	5 pens	6 fish	7 hens	4 boys
×1	2	2	2	3

ADD.

14	13	12	11	10	9	8	7	6
1	2	3	4	5	6	7	8	9
5	4	3	2	1	15	14	13	12
10	11	12	13	14	1	2	3	4
11	10	9	8	7	6	5	4	3
5	6	7	8	9	10	11	12	13
2	1	9	8	9	7	8	6	7
14	15	6	7	7	8	8	9	9

SUBTRACT.

15	15	15	15	15	15	15	15	15
1	2	3	4	5	6	7	8	9
15	15	15	15	15	15	16	16	16
10	11	12	13	14	15	1	2	3
16	16	16	16	16	16	16	16	16
4	5	6	7	8	9	10	11	12
16	16	16	16	15	15	15	15	16
13	14	15	16	9	6	8	7	9

Count by 2's to 100. Count by 3's to 15.

2 × 1 =	2 × 7 =	14 + 1 =	8 + 7 =
2 × 2 =	7 + 7 =	13 + 2 =	7 + 8 =
2 × 3 =	2 × 8 =	12 + 3 =	6 + 9 =
2 × 4 =	8 + 8 =	11 + 4 =	5 + 10 =
2 × 5 =	2 × 6 =	10 + 5 =	4 + 11 =
5 + 5 =	6 + 6 =	9 + 6 =	3 + 12 =

2 + 13 =	11 + 5 =	5 + 11 =	15 − 2 =
1 + 14 =	10 + 6 =	4 + 12 =	15 − 3 =
15 + 1 =	9 + 7 =	3 + 13 =	15 − 4 =
14 + 2 =	8 + 8 =	2 + 14 =	15 − 5 =
13 + 3 =	7 + 9 =	1 + 15 =	15 − 6 =
12 + 4 =	6 + 10 =	15 − 1 =	15 − 7 =

15 − 8 =	15 − 14 =	16 − 5 =	16 − 11 =
15 − 9 =	15 − 15 =	16 − 6 =	16 − 12 =
15 − 10 =	16 − 1 =	16 − 7 =	16 − 13 =
15 − 11 =	16 − 2 =	16 − 8 =	16 − 14 =
15 − 12 =	16 − 3 =	16 − 9 =	16 − 15 =
15 − 13 =	16 − 4 =	16 − 10 =	16 − 16 =

7 × 2 boxes are —— boxes.
8 × 2 clocks are —— clocks.
6 × 2 bells are —— bells.

Count by 5's to 15. Count by 4's to 16.

ADD.

16	15	14	13	12	11	10	9	8
1	2	3	4	5	6	7	8	9
7	6	5	4	3	2	1	17	16
10	11	12	13	14	15	16	1	2
15	14	13	12	11	10	9	8	7
3	4	5	6	7	8	9	10	11
6	5	4	3	2	1	7	6	9
12	13	14	15	16	17	9	8	6

SUBTRACT.

17	17	17	17	17	17	17	17	17
1	2	3	4	5	6	7	8	9
17	17	17	17	17	17	17	17	18
10	11	12	13	14	15	16	17	1
18	18	18	18	18	18	18	18	18
2	3	4	5	6	7	8	9	10
18	18	18	18	18	18	18	18	17
11	12	13	14	15	16	17	18	9

Count by 3's to 18. Count by 6's to 18.

1. A man had 10 hogs and he bought 5 more; how many did he then have?

2. 15 apples; take away 8, leaves —— apples.

3. There are 9 sticks in one box and 7 in another; how many sticks in both?

4. Charles has 5 cents; how many more must he get before he has 15 cents?

5. A man had 16 horses and he sold 7; how many had he left?

6. Arthur had 9 ducks and his papa gave him 8 more; how many did he then have?

7. Mabel had 17 books and she gave 8 to Grace; how many had she left?

8. Paul had 9 pencils and he bought 9 more; how many did he then have?

9. Dan had 18 eggs and he sold 12; how many were left?

10. A lady had 8 birds and she bought 7 more; how many did she then have?

11. Walter had 7 sticks in one hand and 9 in the other hand; how many did he have in both?

12. James had 18 chickens and he sold 6; how many did he have left?

16 + 1 =	10 + 7 =	4 + 13 =	15 + 3 =
15 + 2 =	9 + 8 =	3 + 14 =	14 + 4 =
14 + 3 =	8 + 9 =	2 + 15 =	13 + 5 =
13 + 4 =	7 + 10 =	1 + 16 =	12 + 6 =
12 + 5 =	6 + 11 =	17 + 1 =	11 + 7 =
11 + 6 =	5 + 12 =	16 + 2 =	10 + 8 =

9 + 9 =	3 + 15 =	17 − 4 =	17 − 10 =
8 + 10 =	2 + 16 =	17 − 5 =	17 − 11 =
7 + 11 =	1 + 17 =	17 − 6 =	17 − 12 =
6 + 12 =	17 − 1 =	17 − 7 =	17 − 13 =
5 + 13 =	17 − 2 =	17 − 8 =	17 − 14 =
4 + 14 =	17 − 3 =	17 − 9 =	17 − 15 =

17 − 16 =	18 − 5 =	18 − 11 =	18 − 17 =
17 − 17 =	18 − 6 =	18 − 12 =	18 − 18 =
18 − 1 =	18 − 7 =	18 − 13 =	18 − 0 =
18 − 2 =	18 − 8 =	18 − 14 =	2 × 7 =
18 − 3 =	18 − 9 =	18 − 15 =	2 × 8 =
18 − 4 =	18 − 10 =	18 − 16 =	2 × 9 =

9 + 9 =	2 + 2 + 2 =	2 + 2 + 2 + 2 =
2 × 9 =	3 × 2 =	4 × 2 =
8 + 8 =	4 + 4 + 4 =	3 + 3 + 3 + 3 =
2 × 8 =	3 × 4 =	4 × 3 =

UNITED STATES MONEY.

10 cents (cts.) make 1 dime (d.).
10 dimes make 1 dollar ($).

1. Name all the pieces of money you know.
2. How many cents in a dime?
3. How many five-cent pieces in a dime?
4. How many dimes in a dollar?
5. How many quarters in a dollar?
6. How many fifty-cent pieces in a dollar?
7. How many five-cent pieces in a quarter?
8. How many five-cent pieces in a half-dollar?
9. How many five-cent pieces in a dollar?
10. In $1 there are —— dimes.
11. In 50 cts. there are —— dimes.
12. In 1 dime there are —— cents.
13. In 25 cts. there are —— dimes and —— cts.
14. In 50 cts. there are —— quarters.
15. In 75 cts. there are —— quarters.
16. In $1 there are —— quarters.

NOTE.—The teacher should have real coins for this lesson. This table could not be illustrated, owing to the law of Congress which forbids a print illustrating U. S. coins.

1. How many five-cent pieces in a quarter?

2. How many quarters in a dollar?

3. How many fifty-cent pieces in a dollar?

4. How many dimes in a fifty-cent piece?

5. Mabel had 15 cents and she spent a dime; how much had she left?

6. Frank had 10 cents and his father gave him 8 more; how much had he then?

7. Mary had 18 cents and she spent 8 cents for a book; how much had she left?

8. Charles had 7 cents and his papa gave him 8 more; how much had he then?

9. Fred had 3 quarters and his mamma gave him 1 more; how much had he then?

10. Nell had 5 dimes and her papa gave her 5 more; how much had she then?

11. Tom had a dollar and he spent 2 quarters; how much had he left?

12. Grace had a dollar and she spent 3 quarters; how much had she left?

13. James had fifty cents and he spent 1 quarter; how much had he left?

14. If May had a dollar, how many quarters could she get for it?

The sign of **division**, ÷, means *divide*, and is read *divided by.*

In 2 there are —— ones.
In 3 there are —— ones.
In 4 there are —— twos.
In 6 there are —— threes.
In 6 there are —— twos.
In 8 there are —— fours.
In 8 there are —— twos.
In 9 there are —— threes.
In 10 there are —— fives.
In 10 there are —— twos.
In 12 there are —— fours.
In 12 there are —— threes.
In 12 there are —— sixes.
In 12 there are —— twos.
In 14 there are —— sevens.
In 14 there are —— twos.
In 15 there are —— fives.
In 15 there are —— threes.

2 divided by 1 = ——. 6 divided by 3 = ——.
2 divided by 2 = ——. 6 divided by 2 = ——.
4 divided by 2 = ——. 8 divided by 4 = ——.

2 ÷ 2 = 4 ÷ 2 = 6 ÷ 2 = 10 ÷ 5 =

ADD.

18	17	16	15	14	13	12	11	10
1	2	3	4	5	6	7	8	9
9	8	7	6	5	4	3	2	1
10	11	12	13	14	15	16	17	18
19	18	17	16	15	14	13	12	11
1	2	3	4	5	6	7	8	9
10	9	8	7	6	5	4	3	2
10	11	12	13	14	15	16	17	18

SUBTRACT.

19	19	19	19	19	19	19	19	19
1	2	3	4	5	6	7	8	9
19	19	19	19	19	19	19	19	19
10	11	12	13	14	15	16	17	18
19	20	20	20	20	20	20	20	20
19	1	2	3	4	5	6	7	8
20	20	20	20	20	20	20	20	20
9	10	11	12	13	14	15	16	17
20	20	20	15	16	17	18	15	17
18	19	20	8	9	8	9	7	9

NOTE.—Explanation and work should be given on the blackboard in adding and carrying, before giving the lessons in the book. Also, in subtraction give the explanation and blackboard work to illustrate taking from the next higher, before using the work in the book.

2 ÷ 1 =	6 ÷ 1 =	10 ÷ 2 =	2 × 3 =
3 ÷ 3 =	6 ÷ 2 =	12 ÷ 6 =	2 × 7 =
3 ÷ 1 =	8 ÷ 4 =	12 ÷ 2 =	2 × 8 =
4 ÷ 2 =	8 ÷ 2 =	12 ÷ 3 =	2 × 9 =
6 ÷ 3 =	9 ÷ 3 =	12 ÷ 4 =	9 + 9 =
6 ÷ 2 =	10 ÷ 5 =	14 ÷ 7 =	2 × 5 =

18 + 1 =	12 + 7 =	6 + 13 =	19 + 1 =
17 + 2 =	11 + 8 =	5 + 14 =	18 + 2 =
16 + 3 =	10 + 9 =	4 + 15 =	17 + 3 =
15 + 4 =	9 + 10 =	3 + 16 =	16 + 4 =
14 + 5 =	8 + 11 =	2 + 17 =	15 + 5 =
13 + 6 =	7 + 12 =	1 + 18 =	14 + 6 =

13 + 7 =	6 + 14 =	19 − 2 =	19 − 9 =
12 + 8 =	5 + 15 =	19 − 3 =	19 − 10 =
11 + 9 =	4 + 16 =	19 − 4 =	19 − 11 =
10 + 10 =	3 + 17 =	19 − 5 =	19 − 12 =
9 + 11 =	2 + 18 =	19 − 6 =	19 − 13 =
8 + 12 =	1 + 19 =	19 − 7 =	19 − 14 =
7 + 13 =	19 − 1 =	19 − 8 =	19 − 15 =

19 − 16 =	20 − 4 =	20 − 11 =	20 − 18 =
19 − 17 =	20 − 5 =	20 − 12 =	20 − 19 =
19 − 18 =	20 − 6 =	20 − 13 =	20 − 20 =
19 − 19 =	20 − 7 =	20 − 14 =	20 − 0 =
20 − 1 =	20 − 8 =	20 − 15 =	14 ÷ 2 =
20 − 2 =	20 − 9 =	20 − 16 =	12 ÷ 6 =
20 − 3 =	20 − 10 =	20 − 17 =	2 × 7 =

18 chickens less 6 are —— ——.
19 ducks less 10 are —— ——.
20 hens − 9 hens = ——.
9 owls + 8 owls = ——.
2 times 10 boxes are —— boxes.
3 × 5 sleds are —— sleds.
15 divided by 3 = ——.
18 divided by 9 = ——.

15 ÷ 5 = ——. 18 ÷ 6 = ——. 15 ÷ 3 = ——.

There are —— times 5 hats in 10 hats.
There are —— times 3 balls in 12 balls.

In 15 there are —— fives.
In 16 there are —— eights.
In 15 there are —— threes.
In 18 there are —— nines.
In 16 there are —— twos.
In 18 there are —— twos.
In 18 there are —— threes.
In 20 there are —— tens.
In 18 there are —— sixes.
In 16 there are —— fours.
In 20 there are —— twos.
In 20 there are —— fives.
In 20 there are —— fours.
In 14 there are —— sevens.
In 14 there are —— twos.

$6 \div 3 =$	$2 \times 9 =$	$7 \times 2 =$	$12 \div 4 =$
$6 \div 2 =$	$9 \times 2 =$	$4 \times 3 =$	$12 \div 6 =$
$7 \div 7 =$	$2 \times 10 =$	$2 \times 4 =$	$14 \div 7 =$
$8 \div 4 =$	$3 \times 5 =$	$6 \times 2 =$	$12 \div 3 =$
$8 \div 2 =$	$5 \times 2 =$	$2 \times 7 =$	$14 \div 2 =$
$9 \div 3 =$	$7 \times 1 =$	$8 \times 2 =$	$12 \div 4 =$

2 in 6 —— times.	5 in 10 —— times.
3 in 9 —— times.	3 in 12 —— times.
3 in 6 —— times.	4 in 12 —— times.
4 in 8 —— times.	6 in 12 —— times.
2 in 10 —— times.	2 in 14 —— times.
7 in 14 —— times.	8 in 16 —— times.

One-half of 4 books is —— books.
½ of 6 apples is —— apples.
½ of 8 pencils is —— pencils.
½ of 10 marbles is —— marbles.
½ of 12 eggs is —— eggs.

9 boys have —— eyes.
4 horses have —— feet.
10 girls have —— hands.
8 tops are —— more than 5 tops.
9 balls are —— more than 4 balls.
10 fans are —— more than 6 fans.

18 divided by 2 = ——. 16 divided by 8 = ——.

NOTE.—Illustrate ½ by means of objects, etc.; also, require the children to to so, in the class work.

ADD.

7	4	5	7	5	3	4	7	3	4
2	4	3	3	5	6	4	3	3	5
3	4	2	2	5	7	4	4	3	6
2	4	4	4	5	2	4	3	3	4
+5	4	4	1	0	1	0	3	3	1

6 + 6 + 6 =	9 + 9 + 2 =	3 + 3 + 10 =
5 + 5 + 5 =	7 + 3 + 7 =	7 + 4 + 5 =
4 + 4 + 4 =	6 + 7 + 5 =	5 + 7 + 6 =
7 + 7 + 3 =	10 + 10 + 0 =	2 + 9 + 8 =
4 + 8 + 8 =	8 + 2 + 9 =	3 + 8 + 9 =
3 + 5 + 9 =	3 + 7 + 8 =	7 + 5 + 7 =

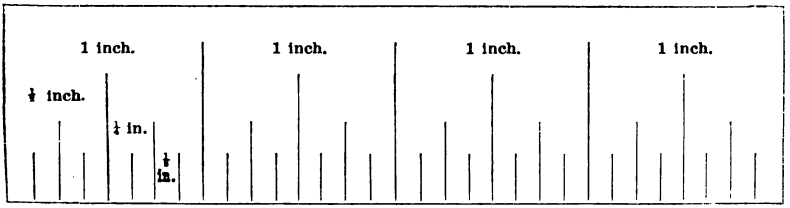
2 × 7 =	2 × 8 =	10 + 10 =	6 ÷ 6 =
3 × 5 =	8 + 4 =	2 × 6 =	8 ÷ 4 =
5 × 2 =	2 × 9 =	6 + 6 =	9 ÷ 3 =
3 × 4 =	9 + 9 =	20 − 10 =	10 ÷ 5 =
4 × 2 =	2 × 7 =	18 − 9 =	12 ÷ 3 =
5 × 4 =	7 + 7 =	16 − 8 =	10 ÷ 2 =
4 × 3 =	2 × 10 =	14 − 7 =	12 ÷ 4 =

2 in 16 —— times.	2 in 18 —— times.
9 in 18 —— times.	8 in 16 —— times.
10 in 20 —— times.	2 in 20 —— times.
3 in 15 —— times.	5 in 15 —— times.
4 in 16 —— times.	6 in 18 —— times.
3 in 18 —— times.	5 in 20 —— times.

Count by 4's to 20.

Count by 5's to 20.

LONG MEASURE.



12 inches (in.) make 1 foot (ft.)
3 feet (ft.) make 1 yard (yd.)

1. Show 1 inch on the foot rule; show 2 inches, show 3 inches, show 4 inches, show 6 inches, show 8 inches, show 9 inches.

2. Draw lines on the blackboard, as near as you can, 1 inch, 6 inches and 12 inches long, and then measure the lines.

3. Measure and learn how many inches wide and how long your reader is.

4. Measure your desk, and tell how long and how wide it is.

5. What is measured by the foot?

6. What is measured by the yard?

7. Name all the things you can that are sold by the yard.

8. Name all the things you can that are sold by the foot.

NOTE.—The *foot* and *yard rule* should be in the school-room for use, and the children should be required to use them in measuring.

The Forty-five Combinations.

ADD.

1	2	2	3	3	4	3	4	5
1	1	2	1	2	1	3	2	1
4	5	6	4	5	6	7	5	6
3	2	1	4	3	2	1	4	3
7	8	5	6	7	8	9	6	7
2	1	5	4	3	2	1	5	4
8	9	6	7	8	9	7	8	9
3	2	6	5	4	3	6	5	4
7	8	9	8	9	8	9	9	9
7	6	5	7	6	8	7	8	9

1. 1 yard is —— feet.
2. ½ of a foot is —— inches.
3. ½ of a yard is —— inches.
4. How do we buy dress goods?
5. How do we buy ribbon?
6. How do we buy lumber?
7. How many inches in a foot?
8. How many inches in a foot and a half?
9. How many half-inches in 1 inch?
10. How many eggs in 1 dozen and a half?
11. Name all the things you can that are sold by the dozen.

Note.—The Forty-five Combinations may be used for drills in addition, and should be thoroughly memorized, and the sums should be read as rapidly as if counting.

SECTION II.

ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION BEYOND 20.

LESSON I.

ADD.

20	19	18	17	16	15	14	13	12
1	2	3	4	5	6	7	8	9
11	10	9	8	7	6	5	4	3
10	11	12	13	14	15	16	17	18
2	1	21	20	19	18	17	16	15
19	20	1	2	3	4	5	6	7
14	13	12	11	10	9	8	7	6
8	9	10	11	12	13	14	15	16

1. In 2 yards there are —— feet.
2. In 3 yards there are —— feet.
3. In 4 yards there are —— feet.
4. In 5 yards there are —— feet.
5. In 6 yards there are —— feet.
6. ½ of a yard is how many inches?
7. Charles had 20 cents and he spent 15 cents; how much had he left?
8. Julia bought 2 yds. of ribbon and she paid 10 cts. a yd.; what did the ribbon cost her?

20 + 1 =	14 + 7 =	8 + 13 =	2 + 19 =
19 + 2 =	13 + 8 =	7 + 14 =	1 + 20 =
18 + 3 =	12 + 9 =	6 + 15 =	21 + 1 =
17 + 4 =	11 + 10 =	5 + 16 =	20 + 2 =
16 + 5 =	10 + 11 =	4 + 17 =	19 + 3 =
15 + 6 =	9 + 12 =	3 + 18 =	18 + 4 =

17 + 5 =	11 + 11 =	5 + 17 =	18 ÷ 9 =
16 + 6 =	10 + 12 =	4 + 18 =	2 × 9 =
15 + 7 =	9 + 13 =	3 + 19 =	9 + 9 =
14 + 8 =	8 + 14 =	2 + 20 =	2 × 10 =
13 + 9 =	7 + 15 =	1 + 21 =	10 + 10 =
12 + 10 =	6 + 16 =	16 ÷ 8 =	2 × 8 =

SUBTRACT.

21	21	21	21	21	21	21	21	21
1	2	3	4	5	6	7	8	9
21	21	21	21	21	21	21	21	21
10	11	12	13	14	15	16	17	18
21	21	21	22	22	22	22	22	22
19	20	21	1	2	3	4	5	6
22	22	22	22	22	22	22	22	22
7	8	9	10	11	12	13	14	15

There are —— times 7 in 14.

There are —— times 8 in 16.

Count by 5's to 25. Count by 4's to 24.

Add all the numbers together that will make 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20.

Subtract all the numbers you can from 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20.

2 times 9 boys are —— ——.

18 girls − 8 girls leaves —— ——.

19 men less 10 men = —— ——.

22 blocks + 3 blocks = —— ——.

½ of 12 hens is —— hens.

½ of 14 eggs is —— eggs.

½ of 16 ducks is —— ducks.

½ of 18 pencils is —— pencils.

½ of 20 balls is —— balls.

½ of a dozen = ——.

In 12 there are —— sixes.

In 18 there are —— sixes.

In 20 there are —— fives.

In 10 there are —— threes and —— left over.

In 11 there are —— fives and —— left over.

In 12 there is —— seven and —— left over.

In 14 there are —— fives and —— left over.

There are —— times 4 cents in 16 cents.

There are —— times 9 caps in 18 caps.

$7 + 7 + 7 =$	$3 + 3 + 3 =$	$15 \div 3 =$
$3 \times 7 =$	$3 \times 3 =$	$16 \div 8 =$
$5 + 5 + 5 =$	$4 + 4 + 4 =$	$20 \div 4 =$
$3 \times 5 =$	$3 \times 4 =$	$18 \div 9 =$
$6 + 6 + 6 =$	$2 + 2 + 2 =$	$21 \div 7 =$
$3 \times 6 =$	$3 \times 2 =$	$21 \div 3 =$

MULTIPLY.

6	7	2	4	5	5	6	7	9
× 2	3	3	3	2	3	3	2	2
3	3	5	10	3	4	3	2	4
× 5	6	4	2	7	4	3	2	2
7	8	2	11	3	5	6	2	2
× 1	2	10	2	4	3	3	7	9

ADD.

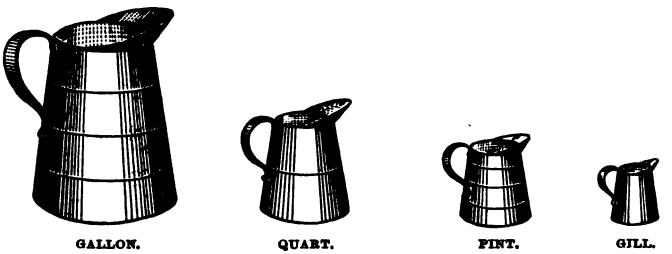
22	21	20	19	18	17	16	15	14
1	2	3	4	5	6	7	8	9
13	12	11	10	9	8	7	6	5
10	11	12	13	14	15	16	17	18
4	3	2	1	5	4	3	2	1
19	20	21	22	17	18	19	20	21

There are —— times 2 in 16.

There are —— times 2 in 18.

21 divided by 3 = ——. 20 divided by 4 = ——.

LIQUID MEASURE.



4 gills (gi.) make 1 pint (pt.).
2 pints make 1 quart (qt.).
4 quarts make 1 gallon (gal.).

1. Find the gill measure; the pint; the quart; the gallon.
2. What is measured by the gill, by the pint, by the quart, by the gallon?
3. Name all the things you can that are sold by these measures.
4. In 1 pint there are —— gills.
5. In 1 quart there are —— pints.
6. In 1 gallon there are —— quarts.
7. In ½ of a quart there is —— pint.
8. In ½ of a gallon there are —— quarts.

NOTE.—The measures should be in the school-room, and should be used by each child.

1. George had 18 eggs and he sold 1 dozen; how many had he left?

2. Mary had 11 yards of ribbon and she bought 11 more; how many did she then have?

3. James had 20 marbles and he gave ½ of them away; how many had he left?

4. Edith bought 2 pints of milk and she paid 3 cents a pint; what did it cost her?

5. Frank bought 2 quarts of milk and he paid 2 cents a pint for it; what did it cost him?

6. Henry bought 1 gallon of syrup and he paid 5 cents a quart for it; what did it cost him?

7. Tom bought ½ gallon of syrup and paid 20 cents for it; how much did he pay a quart for it?

8. Charles had 2 dozen eggs and he sold them for 10 cents a dozen; how much did he get for the eggs?

9. Julia bought 7 yards of ribbon and she paid 3 cents a yard for it; what did it cost her?

10. John has 22 cents, and 1 pint of milk costs 2 cents; how many pints can he get for his 22 cents?

ADD.

23	22	21	20	19	18	17	16	15
1	2	3	4	5	6	7	8	9
14	13	12	11	10	9	8	7	6
10	11	12	13	14	15	16	17	18
5	4	3	2	1	24	23	22	21
19	20	21	22	23	1	2	3	4
20	19	18	17	16	15	14	13	12
5	6	7	8	9	10	11	12	13
11	10	9	8	7	6	5	4	3
14	15	16	17	18	19	20	21	22

SUBTRACT.

22	22	22	22	22	22	22	23	23
16	17	18	19	20	21	22	1	2
23	23	23	23	23	23	23	23	23
3	4	5	6	7	8	9	10	11
23	23	23	23	23	23	23	23	23
12	13	14	15	16	17	18	19	20
23	23	23	24	24	24	24	24	24
21	22	23	1	2	3	4	5	6

$8 + 8 + 8 =$	$6 + 6 + 6 + 6 =$	$21 \div 7 =$
$3 \times 8 =$	$4 \times 6 =$	$24 \div 6 =$
$7 + 7 + 7 =$	$5 + 5 + 5 + 5 =$	$21 \div 3 =$
$3 \times 7 =$	$4 \times 5 =$	$24 \div 8 =$
$6 + 6 + 6 =$	$4 + 4 + 4 + 4 =$	$20 \div 5 =$
$3 \times 6 =$	$4 \times 4 =$	$24 \div 3 =$

$18 + 6 =$	$16 + 9 =$	$14 + 9 =$	$18 + 3 =$
$15 + 8 =$	$15 + 10 =$	$18 + 5 =$	$17 + 7 =$
$12 + 9 =$	$9 + 9 =$	$16 + 6 =$	$19 + 6 =$
$17 + 5 =$	$18 + 7 =$	$17 + 8 =$	$18 + 3 =$
$13 + 9 =$	$17 + 4 =$	$12 + 9 =$	$17 + 4 =$
$19 + 6 =$	$18 + 7 =$	$19 + 6 =$	$18 + 7 =$

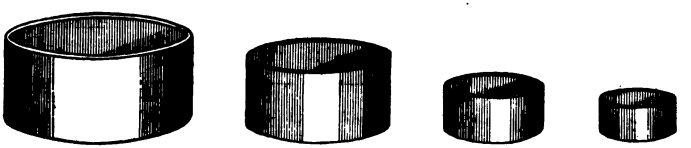
MULTIPLY.

9	10	11	8	12	8	7	6	5
$\times 2$	2	2	2	2	3	3	3	3
2	3	4	5	6	2	3	4	5
$\times 4$	4	4	4	4	5	5	5	5

SUBTRACT.

24	24	24	24	24	24	24	24	24
7	8	9	10	11	12	13	14	17
24	24	24	24	24	24	24	24	24
15	16	18	19	20	21	22	23	24

DRY MEASURE.



Bushel. Half-bushel. Peck. Quart.

2 pints (pt.) make 1 quart (qt.).
8 quarts make 1 peck (pk.).
4 pecks make 1 bushel (bu.).

1. What things are measured by these measures?

2. In 1 peck there are —— quarts.

3. In 1 bushel there are —— pecks.

4. In 1 quart there are —— pints.

5. In 1 bushel there are —— half-bushels.

6. In 8 quarts there are —— pints.

7. ½ of a bushel is —— pecks.

8. ½ of a peck is —— quarts.

9. Charles bought 2 pecks of potatoes and he paid 10 cents a peck; how much did they cost him?

NOTE.—Secure the measures for this lesson, if possible.

ADD.

2	1	25	25	25	25	25	25	25
23	24	1	2	4	6	5	7	9
25	25	25	25	25	25	25	25	25
8	10	12	11	13	15	16	14	17
25	25	25	25	25	25	25	26	27
19	21	20	22	24	23	25	10	13
26	26	26	26	26	26	26	26	26
5	7	6	4	8	11	13	9	12
26	26	26	26	26	26	26	26	26
14	16	15	17	19	18	20	22	21

SUBTRACT.

26	25	24	25	24	25	24	25	24
14	5	7	6	8	7	9	8	10
24	25	24	25	24	25	24	25	24
11	9	12	10	13	11	14	15	15
25	24	25	24	25	24	25	24	25
16	16	17	18	19	19	18	20	21

18 divided by 3 = ——. 18 divided by 6 = ——.
21 divided by 7 = ——. 20 divided by 10 = ——.

1 dozen eggs + 6 eggs = ——.
2 dozen hens + 1 hen = ——.
2 dozen ducks − 6 ducks = ——.
50 chickens less 25 chickens = ——.
2 times 20 clocks = ——.
5 pencils at 5 cents each will cost —— cents.
2 knives at 15 cents each will cost —— cents.
2 books at 25 cents each will cost —— cents.
5 two-cent postage stamps will cost —— cents.
3 five-cent postage stamps will cost —— cents.
4 yds. of ribbon at 6 cents a yd. will cost —— cents.
5 spools of thread at 5 cents a spool will cost —— cents.
7 books at 3 cents each will cost —— cents.
10 two-cent postage stamps will cost —— cents.
4 bottles of ink at 5 cents a bottle will cost —— cents.
In 25 there are —— fives.
In 30 there are —— fives.
In 25 there are —— sixes and —— left over.
In 21 there are —— fives and —— left over.
Count by 5's to 35. Count by 4's to 32.
There are —— times 5 cents in 15 cents.
There are —— times 4 books in 16 books.
There are —— times 2 tops in 18 tops.
There are —— times 4 sleds in 20 sleds.

ADD.

26	26	26	26	26	27	27	27	27
22	23	24	25	26	2	3	4	6
27	27	27	27	27	27	27	27	27
5	7	9	8	10	11	12	13	15
27	27	27	27	27	27	27	27	27
14	16	18	17	19	18	21	20	22
27	27	27	27	27	28	28	28	28
24	23	25	27	26	2	4	3	5

SUBTRACT.

25	24	25	24	25	25	26	26	26
22	23	23	24	25	24	15	17	16
26	26	26	26	26	26	27	27	27
18	20	19	22	25	26	17	18	20
27	27	27	27	50	60	70	80	90
19	26	25	27	25	30	40	30	40
30	40	60	100	70	90	80	45	65
20	20	40	50	30	50	20	25	30

$9 \times 2 =$ $6 \times 3 =$ $5 \times 3 =$ $4 \times 3 =$

$7 \times 3 =$ $8 \times 2 =$ $10 \times 2 =$ $4 \times 4 =$

1. 1 dollar = 100 cents.
2. \$1 − 50 cents = —— cents.
3. \$1 − 20 cents = —— cents.
4. \$1 − 40 cents = —— cents.
5. 2 dozen eggs + 6 eggs = ——.
6. 2 dozen hens + 8 hens = ——.
7. 24 eggs − 1 dozen = ——.
8. 50 cents is —— more than 25 cents.
9. In \$1 there are —— quarters.
10. In \$3 there are —— quarters.
11. In 1 quarter there are —— five-cent pieces.
12. 25 cents is —— more than 5 cents.
13. 5 books at 5 cts. each will cost —— cents.
14. 2 knives at 25 cts. each will cost —— cents.
15. 3 hats at \$1 each will cost —— dollars.
16. ½ of a dollar is —— ——.
17. A boy had 3 dozen eggs and he sold them for 10 cts. a dozen; how much did he get for them?
18. —— is one-half of 10.
19. —— is one-half of 20.
20. There are —— times 5 apples in 25 apples.
21. There are —— times 6 cents in 24 cents.
22. There are —— times 7 balls in 21 balls.
23. There are —— times 5 cups in 20 cups.

$5+5+5+5+5=$	$20\div 4=$	$2\times 10=$
$5\times 5=$	$21\div 3=$	$2\times 12=$
$6+6+6+6+6=$	$24\div 6=$	$2\times 11=$
$5\times 6=$	$25\div 5=$	$2\times 9=$
$4+4+4+4+4=$	$24\div 8=$	$3\times 7=$
$5\times 4=$	$24\div 12=$	$3\times 8=$

$1\times 1=$	$2\times 1=$	$3\times 1=$	$4\times 1=$
$1\times 2=$	$2\times 2=$	$3\times 2=$	$4\times 2=$
$1\times 3=$	$2\times 3=$	$3\times 3=$	$4\times 3=$
$1\times 4=$	$2\times 4=$	$3\times 4=$	$4\times 4=$
$1\times 5=$	$2\times 5=$	$3\times 5=$	$4\times 5=$
$1\times 6=$	$2\times 6=$	$3\times 6=$	$4\times 6=$
$1\times 7=$	$2\times 7=$	$3\times 7=$	$24\div 3=$
$1\times 8=$	$2\times 8=$	$3\times 8=$	$20\div 10=$
$1\times 9=$	$2\times 9=$	$3\times 9=$	$24\div 2=$
$1\times 10=$	$2\times 10=$	$3\times 10=$	$18\div 9=$
$1\times 11=$	$2\times 11=$	$3\times 11=$	$25\div 5=$
$1\times 12=$	$2\times 12=$	$3\times 12=$	$27\div 9=$

ADD.

11	10	12	9	8	13	14	15	20
11	10	12	9	8	13	14	15	20
+ 11	10	12	9	8	13	14	15	20

Count by 5's to 50. Count by 3's to 42.
Recite the tables of 1's, 2's, and 3's.

$8+8+8+8=$	$9+9+9+9=$
$7+7+7+7=$	$10+10+10+10=$

ADD.

7	8	9	10	11	12	6	5	4
7	8	9	10	11	12	6	5	4
7	8	9	10	11	12	6	5	4
7	8	9	10	11	12	6	5	4
5	6	7	8	9	10	11	12	4
5	6	7	8	9	10	11	12	4
5	6	7	8	9	10	11	12	4
5	6	7	8	9	10	11	12	4
5	6	7	8	9	10	11	12	4
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
28	28	28	28	28	28	28	28	28
2	3	4	5	6	8	7	9	11
28	28	28	28	28	28	28	28	28
12	10	13	15	14	16	18	17	19

$4 + 4 + 4 + 4 + 4 =$ $\quad$ $7 + 7 + 7 + 7 + 7 =$

$5 + 5 + 5 + 5 + 5 =$ $\quad$ $8 + 8 + 8 + 8 + 8 =$

$6 + 6 + 6 + 6 + 6 =$ $\quad$ $9 + 9 + 9 + 9 + 9 =$

Recite the tables of 2's and 3's.

NOTE.—Call the children's attention to the fact that four sevens added = 28, and that $4 \times 7 = 28$ is a much shorter way of expressing it.

MULTIPLY.

6	7	8	9	10	11	12	5	4
× 3	3	3	3	3	3	3	3	3
3	1	2	3	4	5	6	7	8
× 3	4	4	4	4	4	4	4	4
9	10	11	12	11	12	13	14	5
× 4	4	4	4	2	2	2	2	2
2	3	4	5	6	7	8	9	10
× 5	5	5	5	5	5	5	5	5
11	12	1	2	3	4	5	6	7
× 5	5	6	6	6	6	6	6	6
8	9	10	11	12	2	1	3	4
× 6	6	6	6	6	7	7	7	7
5	6	1	2	3	4	5	6	10
× 7	7	8	8	8	8	8	8	7
2	4	5	1	10	11	10	11	11
× 2	4	5	9	9	8	8	8	7
12	11	13	14	13	11	12	12	
× 2	2	2	2	3	3	3	4	

Time Measure.

60 seconds (sec.) make 1 minute (min.).
60 minutes make 1 hour (hr.).
24 hours make 1 day (da.).
7 days make 1 week (wk.).
4 weeks make 1 month (nearly).
12 months make 1 year (yr.).
365 days make 1 year (common year).

1. There are —— days in 1 week.
2. 2 weeks have —— days.
3. 3 weeks have —— days.
4. 4 weeks have —— days.
5. 1 month has —— weeks.
6. 2 months have —— weeks.
7. 3 months have —— weeks.
8. 1 year has —— months.
9. 1 year has —— days.
10. How many weeks in 14 days?
11. How many weeks in 28 days?
12. How many weeks in 1 month?
13. How many weeks in 2 months?
14. How many minutes in one-half hour?
15. How many minutes in one quarter of an hour?
16. There are —— minutes in one-half hour.

½ of 12 =	½ of 8 =	21 ÷ 7 =	30 ÷ 15 =
½ of 14 =	½ of 6 =	24 ÷ 8 =	28 ÷ 7 =
½ of 16 =	½ of 4 =	27 ÷ 9 =	24 ÷ 2 =
½ of 18 =	½ of 100 =	24 ÷ 6 =	28 ÷ 4 =
½ of 20 =	½ of 10 =	27 ÷ 3 =	30 ÷ 2 =
½ of 30 =	½ of 8 =	24 ÷ 12 =	40 ÷ 20 =
½ of 40 =	½ of 2 =	30 ÷ 10 =	40 ÷ 10 =

⅓ of 3 pencils is ___ pencil.
⅓ of 6 books are ___ books.
¼ of 4 balls is ___ ball.
¼ of 8 pens are ___ pens.
¼ of 12 eggs are ___ eggs.
⅓ of 9 sticks are ___ sticks.

(Put in the missing numbers.)

10 + ___ = 20	6 + ___ = 12	6 + ___ = 20
5 + ___ = 15	12 + ___ = 20	11 + ___ = 19
7 + ___ = 14	6 + ___ = 19	4 + ___ = 20
9 + ___ = 18	13 + ___ = 20	7 + ___ = 15
8 + ___ = 16	7 + ___ = 19	5 + ___ = 18
15 + ___ = 19	9 + ___ = 12	7 + ___ = 16
6 + ___ = 18	7 + ___ = 13	8 + ___ = 20
5 + ___ = 20	8 + ___ = 18	4 + ___ = 19

Recite the table of 3's, Time table, U. S. Money, Long Measure, Liquid Measure, Dry Measure.

NOTE.—Illustrate in class, ½, ¼, ⅛, etc.

1. John bought a book for 20 cents and a bottle of ink for 5 cents; how much did he spend?

2. If 1 gallon of milk costs 20 cents, what will 2 gallons cost?

3. How many days are there in 3 weeks?

4. If a boy earns 25 cts. a day, how much will he earn in 2 days?

5. If 1 pint of milk costs 3 cents, what will 4 pints cost?

6. Charles has 30 cents: if 1 marble costs 5 cents, how many marbles can he get with his 30 cents?

7. James bought 2 dozen oranges and he gave away 6; how many had he left?

8. Mary had 2 dozen eggs and she found 6 more; how many eggs did she then have?

9. Julia had 50 cents and she spent 25 cents for a book; how much had she left?

10. Dan had 36 ducks and he bought 10 more; how many did he then have?

11. If you had 30 cents, and 1 spool of thread cost 5 cents, how many spools of thread could you buy with the 30 cents?

12. Mary bought a basket for 25 cents and a doll for 15 cents; how much money did she spend?

ADD.

28	28	28	28	28	28	28	28	28
20	22	21	23	25	24	26	28	27
29	29	29	29	29	29	29	29	29
1	3	2	4	5	7	6	8	10
29	29	29	29	29	29	29	29	29
9	11	13	12	14	16	18	17	19
29	29	29	29	29	29	29	29	29
20	22	21	23	24	26	25	27	29
29	25	15	20	16	30	40	50	40
28	25	15	20	16	30	40	50	10

1. ½ of a yard is —— inches.
2. ½ of a foot is —— inches.
3. ½ of a pint is —— gills.
4. ½ of a quart is —— pints.
5. ½ of a gallon is —— quarts.
6. ½ of a peck is —— quarts.
7. ½ of a bushel is —— pecks.
8. 5 is what part of 10, 15?
9. 4 is what part of 8, 12, 16?
10. What two numbers make 20?
11. What number is twice 15?
12. What number is ½ of 40?
13. 2 is ¼ of ——.
14. ½ of 100 is ——.
15. —— is one-half of 50.

SUBTRACT.

28	28	28	28	28	28	28	28	28
9	10	12	18	19	20	27	17	16
29	29	29	29	29	29	29	29	29
19	12	27	29	13	15	17	16	18
28	28	29	28	29	28	29	30	30
15	23	24	22	26	13	22	15	10
40	50	60	70	80	90	40	70	100
20	25	30	40	40	50	25	30	50

MULTIPLY.

7	9	10	11	12	13	14	15	16
× 2	2	2	2	2	2	2	2	2
17	18	19	20	21	22	23	25	26
× 2	2	2	2	2	2	2	2	2
27	28	29	30	31	33	32	34	35
× 2	2	2	2	2	2	2	2	2
6	9	7	8	10	11	12	6	7
× 3	3	3	3	3	3	3	4	4

NOTE.—Give explanation and blackboard work for multiplying and carrying, before using the work in the book.

$4 \times 1 =$	$5 \times 1 =$	$6 \times 1 =$	$12 \div 4 =$
$4 \times 2 =$	$5 \times 2 =$	$6 \times 2 =$	$15 \div 5 =$
$4 \times 3 =$	$5 \times 3 =$	$6 \times 3 =$	$24 \div 8 =$
$4 \times 4 =$	$5 \times 4 =$	$6 \times 4 =$	$30 \div 10 =$
$4 \times 5 =$	$5 \times 5 =$	$6 \times 5 =$	$28 \div 7 =$
$4 \times 6 =$	$5 \times 6 =$	$6 \times 6 =$	$30 \div 6 =$
$4 \times 7 =$	$5 \times 7 =$	$6 \times 7 =$	$30 \div 2 =$
$4 \times 8 =$	$5 \times 8 =$	$6 \times 8 =$	$30 \div 5 =$
$4 \times 9 =$	$5 \times 9 =$	$6 \times 9 =$	$28 \div 4 =$
$4 \times 10 =$	$5 \times 10 =$	$6 \times 10 =$	$35 \div 7 =$
$4 \times 11 =$	$5 \times 11 =$	$6 \times 11 =$	$36 \div 9 =$
$4 \times 12 =$	$5 \times 12 =$	$6 \times 12 =$	$35 \div 5 =$

ADD.

30	30	30	30	30	30	30	30	30
10	9	8	7	6	5	11	4	12
30	30	30	30	30	30	30	30	30
13	15	14	16	17	19	18	20	22
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12

NOTE.—Call the children's attention to the fact that seven sixes added = 42, and that $7 \times 6 = 42$, etc., is a much shorter way of expressing it.

ADD.

30	30	30	30	30	30	30	30	30
23	24	26	25	27	26	28	30	29
31	60	33	34	35	36	37	38	39
4	7	9	8	6	5	10	12	11
40	40	40	40	40	40	40	40	40
5	30	29	28	26	31	35	25	37
40	40	40	41	41	41	41	41	41
39	36	38	9	10	8	11	12	14
41	41	41	41	41	41	41	41	41
13	15	17	16	18	20	19	21	23
41	41	41	41	41	41	41	41	41
24	22	25	27	26	28	30	29	31
41	41	41	41	41	41	41	41	41
33	32	34	36	35	38	37	39	40
80	40	30	50	20	30	10	80	70
20	40	60	40	60	40	70	10	20
0	8	6	8	7	3	6	10	10
25	45	17	15	17	20	30	40	19
25	10	48	15	17	20	30	40	26
50	14	16	15	17	20	30	20	37

Recite the tables of 4's, 5's, and 6's.

1. In 30 there are —— sixes.
2. In 27 there are —— nines.
3. In 28 there are —— sevens.
4. In 30 there are —— fives.
5. In 30 there are —— tens.
6. In 30 there are —— fifteens.
7. In 32 there are —— eights.
8. In 32 there are —— fours.
9. In 35 there are —— sevens.
10. In 35 there are —— fives.
11. In 36 there are —— sixes.
12. In 40 there are —— tens.
13. In 40 there are —— fives.
14. In 40 there are —— eights.
15. 14 boys have —— hands.
16. 14 girls have —— eyes.
17. 15 birds have —— wings.
18. 20 birds have —— eyes.
19. 7 dogs have —— feet.
20. There are —— times 5 tops in 25 tops.
21. There are —— times 7 pens in 21 pens.
22. There are —— times 6 books in 30 books.
23. There are —— times 8 hats in 24 hats.
24. There are —— times 7 sleds in 28 sleds.
25. There are —— times 6 dolls in 18 dolls.
26. There are —— times 3 caps in 24 caps.

ADD.

42	42	42	42	42	42	42	42	42
8	10	9	11	14	16	17	19	18
42	42	42	42	42	42	42	42	42
22	27	28	30	29	38	40	39	48
42	43	43	43	43	43	43	43	43
49	7	9	10	17	19	18	27	37
43	43	43	43	43	43	44	44	44
28	39	29	38	42	43	6	7	9
44	44	44	44	44	47	44	44	44
16	17	26	25	27	18	19	28	29
44	44	44	44	44	44	45	45	45
36	38	35	37	39	44	5	6	8
45	45	45	45	45	45	45	45	45
9	15	17	19	16	18	25	27	26
45	45	45	45	45	45	45	45	50
28	35	29	36	38	39	37	45	25
17	10	19	27	42	26	19	29	36
19	12	38	16	19	15	12	11	10
20	17	14	15	17	13	48	17	19
16	40	18	35	18	38	14	28	14

Count by 5's to 100. Count by 10's to 100.

4 in 20 —— times.	5 in 25 —— times.
6 in 24 —— times.	6 in 30 —— times.
4 in 24 —— times.	10 in 30 —— times.
8 in 24 —— times.	15 in 30 —— times.
3 in 24 —— times.	3 in 21 —— times.
7 in 35 —— times.	7 in 21 —— times.
9 in 27 —— times.	4 in 28 —— times.
7 in 28 —— times.	3 in 27 —— times.

1. 20 is what part of 40?
2. What two numbers make 50?
3. What three numbers make 30?
4. 8 is one-half of what number?
5. Charles had $1 and he spent 75 cents; how much had he left?
6. Nell bought 3 yards of ribbon and she paid 20 cents a yard; how much did the ribbon cost her?
7. Dan had $1 and he spent 25 cents; how much had he left?
8. ½ of 20 books is how many books?
9. John bought 7 feet of lumber at 3 cents a foot; how much did it cost him?
10. May bought 2 yards of dress goods at 30 cents a yard; what did it cost her?
11. George had 4 dozen eggs and he sold 1½ dozen; how many had he left?

MULTIPLY.

11	12	13	15	18	19	20	21	23
× 2	2	2	2	2	2	2	2	2
24	25	26	27	28	29	30	31	32
× 2	2	2	2	2	2	2	2	2
33	35	34	37	36	38	40	39	42
× 2	2	2	2	2	2	2	2	2
44	45	47	49	48	50	11	13	12
× 2	2	2	2	2	2	3	3	3

SUBTRACT.

30	30	30	30	30	30	30	30	30
14	16	18	17	19	21	20	22	23
30	30	30	30	30	30	30	31	31
24	26	25	27	29	28	30	1	2
31	31	31	31	31	31	31	31	31
3	4	6	5	7	9	8	10	12
31	31	31	31	31	31	31	31	31
11	14	13	16	15	17	19	18	20

Recite the tables of 4's, of 5's, and of 6's.

Recite the Time Table.

$7 \times 1 =$	$15 \div 3 =$	$24 \div 6 =$	$30 \div 10 =$
$7 \times 2 =$	$18 \div 9 =$	$25 \div 5 =$	$30 \div 5 =$
$7 \times 3 =$	$20 \div 4 =$	$27 \div 3 =$	$30 \div 3 =$
$7 \times 4 =$	$18 \div 3 =$	$28 \div 4 =$	$30 \div 15 =$
$7 \times 5 =$	$21 \div 7 =$	$27 \div 9 =$	$32 \div 8 =$
$7 \times 6 =$	$24 \div 2 =$	$28 \div 7 =$	$35 \div 5 =$
$7 \times 7 =$	$21 \div 3 =$	$30 \div 6 =$	$32 \div 4 =$

SUBTRACT.

31	31	31	31	31	31	31	31	31
22	24	23	25	27	26	28	30	29
31	32	32	32	32	32	32	32	32
31	1	3	5	4	6	8	7	9
32	32	32	32	32	32	32	32	32
13	15	14	16	18	17	19	21	23
32	32	32	32	32	32	32	33	33
25	24	26	28	27	29	31	4	6
33	33	33	33	33	33	33	33	33
5	7	9	8	13	15	16	18	17

$12 + 12 + 12 =$	$9 + 9 + 9 + 9 + 9 =$
$10 + 10 + 10 =$	$12 + 12 + 12 + 12 + 12 =$
$11 + 11 + 11 =$	$10 + 10 + 10 + 10 + 10 =$

Recite the table for U. S. Money.

PUT IN THE MISSING NUMBERS.

5 + ___ = 14	15 + ___ = 25	10 − ? = 8
18 + ___ = 20	8 + ___ = 15	12 − ? = 4
9 + ___ = 27	4 + ___ = 13	13 − ? = 7
10 + ___ = 15	6 + ___ = 17	14 − ? = 9
7 + ___ = 21	9 + ___ = 20	11 − ? = 7
4 + ___ = 12	8 + ___ = 17	8 − ? = 3
8 + ___ = 14	10 + ___ = 25	9 − ? = 7
9 + ___ = 15	6 + ___ = 20	14 − ? = 8
7 + ___ = 18	7 + ___ = 13	15 − ? = 9
9 + ___ = 14	9 + ___ = 14	16 − ? = 7
3 + ___ = 13	6 + ___ = 15	15 − ? = 5
2 + ___ = 17	8 + ___ = 18	14 − ? = 6

9 × 2 =	7 × 1 =	30 ÷ 6 =	25 ÷ 5 =
8 × 3 =	7 × 2 =	35 ÷ 5 =	21 ÷ 7 =
5 × 5 =	7 × 3 =	32 ÷ 4 =	24 ÷ 8 =
9 × 3 =	7 × 4 =	30 ÷ 5 =	18 ÷ 6 =
8 × 4 =	7 × 5 =	35 ÷ 7 =	12 ÷ 4 =
5 × 6 =	7 × 6 =	32 ÷ 8 =	9 ÷ 3 =
6 × 3 =	7 × 7 =	36 ÷ 6 =	14 ÷ 7 =
4 × 7 =	7 × 8 =	36 ÷ 9 =	15 ÷ 3 =
9 × 4 =	7 × 9 =	27 ÷ 3 =	12 ÷ 3 =
6 × 6 =	7 × 10 =	36 ÷ 4 =	18 ÷ 3 =
5 × 3 =	7 × 11 =	27 ÷ 9 =	40 ÷ 8 =
10 × 2 =	7 × 12 =	30 ÷ 10 =	40 ÷ 5 =

Recite the table of 7's. Long Measure.

1. Henry bought 2 bushels of potatoes and paid 40 cents a bushel; how much did they cost him?

2. If a man earns 25 cts. in 1 hour, how much will he earn in 4 hours?

3. Nell bought 4 yds. of ribbon and she paid 20 cts. a yard; how much did it cost her?

4. If 1 book costs 10 cents, how many books can I buy with 70 cents?

5. Tom had 60 cts. and he paid 30 cts. for a book and 20 cts. for a slate; how much had he left?

6. May bought a thimble for 35 cts., a spool of thread for 5 cts., and a ribbon for 10 cts.; how much did she spend?

7. John had 4 dozen hens and he sold 18; how many had he left?

8. If 1 clock costs $8, how many clocks can be bought with $32?

9. I have 20 cookies, and if I divide them equally among 5 girls how many will each girl get?

10. How many marbles at 2 cts. apiece can I buy for 30 cts.?

11. How many books at 5 cts. apiece can I buy for 40 cts.?

12. How many dozen eggs at 12 cts. a dozen can I buy for 36 cts.?

SUBTRACT.

33	33	33	33	33	33	33	33	33
19	21	20	24	26	25	27	29	28
33	34	34	34	34	34	34	34	34
33	5	7	6	8	9	13	15	17
34	34	34	34	34	34	34	34	34
18	19	21	25	27	26	28	34	29
35	35	35	35	35	35	35	35	35
6	8	7	9	15	17	16	18	26
35	35	35	35	35	36	36	36	36
19	27	29	28	35	7	9	8	17
36	36	36	36	36	37	37	37	37
19	18	27	29	28	8	9	18	19

MULTIPLY.

17	14	22	41	43	46	18	16	24
× 2	2	2	2	2	2	2	2	2
8	6	5	4	7	9	11	10	12
× 3	3	3	3	3	3	3	3	3
14	13	15	17	18	20	19	21	22
× 3	3	3	3	3	3	3	3	3

Recite the table of 7's.

ADD.

46	46	46	46	46	46	46	46
4	6	5	7	9	8	14	16
46	46	46	46	46	46	46	46
15	17	19	18	24	26	25	27
46	46	46	46	46	46	46	46
29	28	34	36	35	37	39	38
46	46	46	47	47	47	47	47
44	46	45	3	5	4	6	7
27	37	17	25	16	15	26	19
13	19	18	26	9	37	14	27
46	23	29	30	38	24	38	35

SUBTRACT.

37	37	37	38	38	38	38	38
28	37	29	9	18	19	29	28
39	39	39	40	40	40	40	40
9	19	39	1	2	4	3	5
40	40	40	40	40	40	40	40
6	8	7	10	9	11	13	12
40	40	40	40	40	40	40	40
14	16	15	17	19	18	20	22

Recite the table of 7's. Liquid Measure.

How many two-cent postage stamps can I buy for 20 cts. ?

How many two-cent postage stamps can I buy for 10 cts. ?

How many two-cent postage stamps can I buy for 30 cts. ?

7 pencils at 5 cts. a pencil will cost —— cts.

3 dozen eggs at 20 cts. a dozen will cost —— cts.

4 doz. hens at 3 dollars a doz. will cost $——.

3 knives at 25 cts. a knife will cost —— cts.

2 books at 50 cts. a book will cost ——.

7 yds. of calico at 6 cts. a yd. will cost —— cts.

4 yds. of ribbon at 7 cts. a yd. will cost —— cts.

8 yds. of ribbon at 4 cts. a yd. will cost —— cts.

5 yds. of ribbon at 8 cts. a yd. will cost —— cts.

8 bottles of ink at 5 cts. a bottle will cost —— cts.

10 two-cent postage stamps will cost —— cts.

9 spools of thread at 5 cts. a spool will cost —— cts.

5 books at 10 cts. a book will cost —— cts.

11 hats at 2 dollars a hat will cost $——.

2 bu. of potatoes at 40 cts. a bu. will cost —— cts.

2 bu. of apples at 50 cts. a bu. will cost ——.

In 30 there are —— sixes.

In 40 there are —— eights.

20 ÷ 5 =	36 ÷ 6 =	1 × 8 =	7 × 12 =
30 ÷ 6 =	36 ÷ 3 =	2 × 8 =	6 × 10 =
30 ÷ 10 =	36 ÷ 12 =	3 × 8 =	6 × 11 =
30 ÷ 5 =	28 ÷ 4 =	4 × 8 =	6 × 12 =
30 ÷ 2 =	28 ÷ 7 =	5 × 8 =	5 × 10 =
30 ÷ 15 =	27 ÷ 3 =	6 × 8 =	5 × 11 =
32 ÷ 8 =	27 ÷ 9 =	7 × 8 =	5 × 12 =
32 ÷ 4 =	40 ÷ 8 =	7 × 9 =	4 × 10 =
35 ÷ 5 =	40 ÷ 5 =	7 × 10 =	4 × 11 =
35 ÷ 7 =	40 ÷ 4 =	7 × 11 =	4 × 12 =

ADD.

47	47	47	47	47	47	47	47
8	13	9	14	16	17	18	19
47	47	47	47	47	47	47	47
23	25	24	26	28	27	29	33
47	47	47	47	47	47	47	47
34	36	35	37	38	43	39	44
47	47	47	48	48	48	48	48
45	47	46	2	4	3	5	7

9 + 9 + 9 + 9 = 8 + 8 + 8 + 8 =

11 + 11 + 11 + 11 = 7 + 7 + 7 + 7 =

Count by 3's to 42. Count by 4's to 48.

SUBTRACT.

40	40	40	40	40	40	40	40
21	23	25	24	26	28	27	29
40	40	40	40	40	40	40	40
31	33	32	34	35	37	36	38
40	41	41	41	41	41	41	41
39	2	3	5	4	6	8	7
41	41	41	41	41	41	41	41
9	12	14	13	15	17	16	18
41	41	41	41	41	41	41	41
22	19	23	25	24	26	28	27

ADD.

48	48	48	48	48	48	48	48
6	9	12	14	13	15	17	16
48	48	48	48	48	48	48	48
18	22	19	23	25	24	26	28
48	48	48	48	48	48	48	48
27	29	32	34	33	35	37	36
17	20	36	29	18	19	21	46
16	18	14	36	27	13	19	7
29	13	17	10	35	27	36	26
30	49	18	15	14	16	10	12

Count by 6's to 36. Count by 7's to 28.

ADD.

48	48	48	48	48	48	48	48
38	42	39	43	45	44	46	48
48	49	49	49	49	49	49	49
47	1	2	4	3	5	7	6
49	49	49	49	49	49	49	49
8	11	9	12	14	13	15	16
49	49	49	49	49	49	49	49
18	17	19	21	22	24	23	25
49	49	49	49	49	49	49	49
26	28	27	29	31	33	32	34
49	49	49	49	49	49	49	49
36	35	37	39	38	41	43	42
49	49	49	49	49	49	50	50
44	46	45	47	48	49	10	12
50	50	50	50	50	50	50	50
17	19	20	25	30	35	40	45
19	16	18	52	44	17	16	14
26	9	29	9	15	38	37	25
37	57	17	14	8	26	18	39

Recite the table for Dry Measure.

Count by 6's to 42. Count by 7's to 35.

SUBTRACT.

41	41	41	41	41	41	41	41
29	41	32	33	35	34	36	38
41	41	42	42	42	42	42	42
37	39	3	5	4	6	7	9
42	42	42	42	42	42	42	42
8	13	15	14	16	18	23	19
42	42	42	42	42	42	42	42
24	26	25	27	29	28	33	35
42	42	42	42	43	43	43	43
36	38	37	39	4	6	5	7
43	43	43	43	43	43	43	43
8	14	9	15	17	16	18	24
43	43	43	43	43	43	43	43
19	25	27	26	28	34	29	35
43	43	43	43	44	44	44	44
36	38	39	43	5	6	8	7

Count by 3's to 60. Count by 4's to 80.

17	20	29	36	26	19	17	35
16	30	18	21	10	25	26	26
+ 29	+ 20	+ 26	+ 28	+ 48	+ 18	+ 22	+ 27

1. If 1 barrel of flour costs $8, how many barrels can I buy for $48?

2. If 1 slate costs 10 cts., how many slates can I buy for 60 cts.?

3. John had 20 sticks of candy, and he divided it equally among 5 boys; how many sticks did each boy get?

4. If 1 book costs 20 cts., how many books can I buy for 60 cts.?

5. How many days in 4 weeks?

6. How many months in a year?

7. How many weeks in a year?

8. If 1 peck of potatoes costs 20 cts., how much will 1 bushel cost?

9. If I pay 6 cts. for 1 yd. of calico, what will 7 yds. cost me?

10. How many dozen eggs at 12 cts. a doz. can I buy for 72 cts.?

11. If a boy earns 20 cts. an hour, how much will he earn in 5 hours?

12. In 1 foot there are —— inches.

13. In 3 feet there are — - inches.

14. If 1 quart of milk costs 8 cts., how much will 1 gallon cost?

15. If 1 gallon of syrup costs 40 cts., what will 2 gallons cost?

MULTIPLY.

23	24	25	26	27	28	29	30
× 3	3	3	3	3	3	3	3
31	32	11	10	12	13	14	15
× 3	3	4	4	4	4	4	4
16	17	18	19	20	21	22	23
× 4	4	4	4	4	4	4	4
9	10	11	12	13	14	15	16
× 5	5	5	5	5	5	5	5
17	18	19	20	9	8	7	6
× 5	5	5	5	6	6	6	6
9	6	7	7	8	10	11	11
× 7	5	6	9	6	8	7	8

SUBTRACT.

44	44	44	44	44	44	44	44
9	15	17	16	18	25	19	26
44	44	44	44	44	44	44	44
27	29	28	35	37	39	38	44
45	45	45	45	45	45	45	45
6	8	7	9	16	18	17	19

Recite the table of 7's. Liquid Measure.

SUBTRACT.

45	45	45	45	45	45	45	45
25	26	28	27	29	36	38	37
45	45	46	46	46	46	46	46
39	45	7	9	8	17	19	18
46	46	46	46	46	47	47	47
27	29	28	37	39	8	18	9
47	47	47	47	47	50	50	50
19	28	38	29	39	20	25	40

MULTIPLY.

10	11	12	13	14	15	4	5	0
× 6	6	6	6	6	6	7	7	2
6	7	0	8	9	10	11	12	3
× 7	7	7	7	7	7	7	7	7
13	14	3	4	0	6	7	10	5
× 7	7	8	8	8	8	8	8	8
4	0	5	6	7	2	8	8	3
× 4	3	5	6	7	2	7	6	3

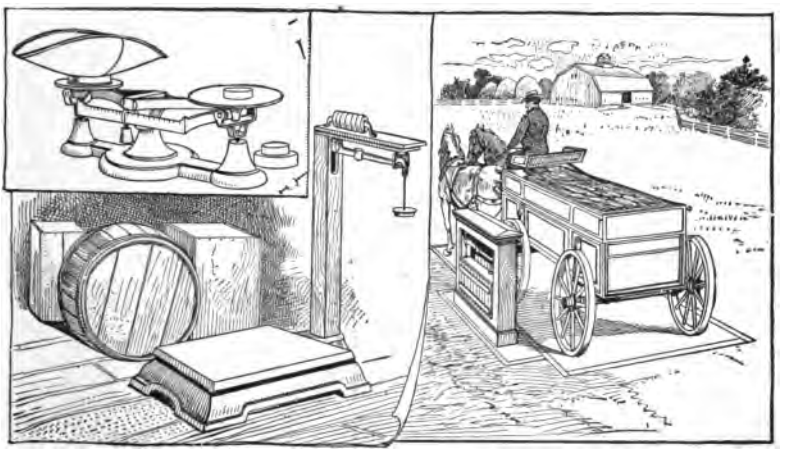
Review all of the tables.

NOTE.—Call the children's attention to the fact that 0 multiplied by 2 = 0.

SECTION III.

LESSON I.

Weight.



16 ounces (oz.) make 1 pound (lb.)

1. Where can we see things sold by the lb.?
2. How many different kinds of scales do you see?
3. There are —— ounces in 1 pound.
4. If 1 pound of fruit costs 5 cts., what will 10 pounds cost?
5. If 1 pound of sugar costs 9 cts., what will 7 pounds cost?

Note.—Secure from a grocer that which will illustrate the weighing of ordinary articles from a grocery store.

$28 \div 4 =$	$32 \div 4 =$	$36 \div 12 =$	$48 \div 6 =$
$24 \div 3 =$	$30 \div 5 =$	$40 \div 8 =$	$48 \div 12 =$
$28 \div 7 =$	$32 \div 8 =$	$40 \div 5 =$	$48 \div 4 =$
$24 \div 4 =$	$30 \div 6 =$	$40 \div 10 =$	$45 \div 9 =$
$21 \div 7 =$	$35 \div 5 =$	$40 \div 4 =$	$45 \div 5 =$
$24 \div 12 =$	$30 \div 10 =$	$42 \div 6 =$	$44 \div 11 =$
$21 \div 3 =$	$35 \div 7 =$	$42 \div 7 =$	$44 \div 4 =$
$25 \div 5 =$	$36 \div 6 =$	$48 \div 8 =$	$20 \div 5 =$

$\frac{1}{2}$ of 20 =	$\frac{1}{2}$ of 50 =	$\frac{1}{4}$ of 4 =	$8 \times 1 =$
$\frac{1}{2}$ of 18 =	$\frac{1}{2}$ of 60 =	$\frac{1}{4}$ of 8 =	$8 \times 2 =$
$\frac{1}{2}$ of 16 =	$\frac{1}{2}$ of 80 =	$\frac{1}{4}$ of 12 =	$8 \times 3 =$
$\frac{1}{2}$ of 14 =	$\frac{1}{2}$ of 100 =	$\frac{1}{4}$ of 16 =	$8 \times 4 =$
$\frac{1}{2}$ of 12 =	$\frac{1}{2}$ of 4 =	$\frac{1}{4}$ of 20 =	$8 \times 5 =$
$\frac{1}{2}$ of 8 =	$\frac{1}{3}$ of 9 =	$\frac{1}{5}$ of 5 =	$8 \times 6 =$
$\frac{1}{2}$ of 30 =	$\frac{1}{3}$ of 6 =	$\frac{1}{5}$ of 10 =	$8 \times 7 =$
$\frac{1}{2}$ of 40 =	$\frac{1}{3}$ of 12 =	$\frac{1}{2}$ of 20 =	$7 \times 6 =$

PUT IN THE MISSING NUMBERS.

$20 + __ = 40$	$50 + __ = 100$	$7 + __ = 13$
$25 + __ = 50$	$9 + __ = 18$	$9 + __ = 16$
$30 + __ = 60$	$7 + __ = 16$	$8 + __ = 17$
$50 + __ = 75$	$6 + __ = 15$	$7 + __ = 18$
$80 + __ = 90$	$9 + __ = 17$	$9 + __ = 19$
$70 + __ = 80$	$8 + __ = 19$	$5 + __ = 16$
$60 + __ = 70$	$5 + __ = 14$	$9 + __ = 14$

NOTE.—$\frac{1}{4}$, $\frac{1}{5}$, etc., should be illustrated by the teacher and pupils during the recitation.

ADD.

51	51	51	51	51	51	52	52
9	19	29	39	49	51	8	10
52	52	52	52	52	52	52	52
9	12	18	28	19	39	48	49
53	53	53	53	53	53	53	53
7	9	8	17	19	18	27	29
53	53	53	53	54	54	54	54
28	37	39	38	6	8	7	9
54	54	54	54	54	54	54	44
16	18	17	19	26	28	27	29

4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12

$8 \times 4 =$ $8 \times 6 =$ $8 \times 8 =$ $8 \times 10 =$

$8 \times 5 =$ $8 \times 7 =$ $8 \times 9 =$ $8 \times 11 =$

$4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 =$

NOTE.—Call attention to the fact that 8×4 is a much shorter way of showing the value of eight fours, etc.

1 × 4 =	8 × 1 =	7 × 1 =	8 ones =
2 × 5 =	8 × 2 =	7 × 2 =	8 twos =
3 × 4 =	8 × 3 =	7 × 3 =	8 threes =
7 × 8 =	8 × 4 =	7 × 4 =	8 fours =
6 × 7 =	8 × 5 =	7 × 5 =	8 fives =
3 × 8 =	8 × 6 =	7 × 6 =	8 sixes =
2 × 10 =	8 × 7 =	7 × 7 =	8 sevens =
3 × 9 =	8 × 8 =	7 × 8 =	8 eights =
5 × 7 =	8 × 9 =	7 × 9 =	8 nines =
8 × 4 =	8 × 10 =	7 × 10 =	8 tens =
7 × 3 =	8 × 11 =	7 × 11 =	8 elevens =
3 × 6 =	8 × 12 =	7 × 12 =	8 twelves =

1. What two numbers make 20?
2. What two numbers make 30?
3. What two numbers make 50?
4. What two numbers make 40?
5. 4 is what part of 12, 8, 16, 20?
6. 3 is what part of 6, 9, 12, 15?
7. What is $\frac{1}{3}$ of 6, 9, 12, 15, 18, 24?
8. What is $\frac{1}{4}$ of 4, 8, 12, 20, 16, 24?
9. What is $\frac{1}{4}$ of 8? $\frac{2}{4}$ of 8? $\frac{3}{4}$ of 8?
10. 25 cents is what part of a dollar?
11. 2 pecks is what part of a bushel?
12. 1 pint is what part of a quart?
13. 1 foot is what part of a yard?

NOTE.—Illustrate $\frac{2}{4}$ and $\frac{3}{4}$ by objects.

ADD.

14	22	31	43	41	24	45
26	13	47	12	36	31	26
41	15	16	34	13	44	15
22	55	73	26	84	37	14
36	12	17	15	6	32	24
32	25	1	45	10	25	52
48	59	56	22	25	27	42
26	18	27	34	44	34	36
14	23	15	24	23	24	16
36	53	19	26	43	26	40
27	18	27	35	27	43	24
26	27	52	27	14	25	16
38	27	33	60	40	84	73
27	36	42	30	40	6	17
28	26	15	7	8	10	10
62	94	88	35	76	46	57
18	3	12	30	20	34	33
20	3	0	26	4	18	10
24	58	24	73	82	36	76
36	20	60	20	10	50	20
40	2	6	7	8	2	4

Recite the table of 8's.

$48 \div 12 =$	$1 \times 7 =$	$54 \div 9 =$	$1 \times 8 =$
$45 \div 5 =$	$2 \times 7 =$	$55 \div 11 =$	$2 \times 8 =$
$48 \div 8 =$	$3 \times 7 =$	$54 \div 6 =$	$3 \times 8 =$
$42 \div 7 =$	$4 \times 7 =$	$55 \div 5 =$	$4 \times 8 =$
$44 \div 4 =$	$5 \times 7 =$	$56 \div 8 =$	$5 \times 8 =$
$48 \div 6 =$	$6 \times 7 =$	$42 \div 6 =$	$6 \times 8 =$
$40 \div 5 =$	$7 \times 7 =$	$56 \div 7 =$	$7 \times 8 =$
$36 \div 9 =$	$8 \times 7 =$	$36 \div 6 =$	$8 \times 8 =$
$38 \div 9 =$	$9 \times 7 =$	$40 \div 8 =$	$9 \times 8 =$
$49 \div 7 =$	$10 \times 7 =$	$36 \div 12 =$	$10 \times 8 =$
$50 \div 10 =$	$11 \times 7 =$	$40 \div 5 =$	$11 \times 8 =$
$50 \div 5 =$	$12 \times 7 =$	$45 \div 9 =$	$12 \times 8 =$

1. John had \$1 and he spent ½ of it; how much had he left?

2. If a boy earns 7 cts. in 1 hour, how much will he earn in 8 hours?

3. If Dan earns 10 cts. a day, how much will he earn in 2 weeks?

4. If 1 yd. of cloth costs 80 cts., what will ½ yd. cost?

5. If 1 yd. of calico costs 6 cts., what will 8 yds. cost?

6. If 1 yd. of ribbon costs 7 cts., how many yds. can I buy for 49 cts.?

7. If 1 qt. of syrup costs 10 cts., what will 1 gal. cost?

8. If 1 qt. of milk costs 5 cts., what will 1 gal. cost?

9. If 1 doz. eggs costs 8 cts., how many doz. can I buy for 48 cts.?

SUBTRACT.

60	67	69	68	66	65	70	70	67
30	34	35	23	52	43	20	28	29
66	68	70	70	70	70	70	70	61
19	39	27	38	11	40	50	19	15
68	66	67	66	61	61	60	60	60
39	17	38	29	37	28	37	14	36
60	64	64	64	64	63	63	63	63
29	37	29	28	36	19	27	18	24
63	63	63	63	70	70	70	70	70
35	39	57	48	4	2	3	5	7
70	70	70	70	70	70	70	70	70
6	9	8	12	14	16	15	18	23
70	70	70	70	70	70	70	70	70
13	24	26	28	27	33	36	34	37
70	70	70	70	70	70	70	70	70
43	45	47	46	44	53	56	52	54

$13 \times 2 =$	$14 \times 2 =$	$9 \times 6 =$	$4 \times 9 =$
$12 \times 5 =$	$15 \times 2 =$	$7 \times 9 =$	$9 \times 3 =$
$13 \times 3 =$	$14 \times 3 =$	$8 \times 8 =$	$5 \times 9 =$
$12 \times 4 =$	$10 \times 5 =$	$9 \times 5 =$	$8 \times 6 =$
$10 \times 4 =$	$11 \times 5 =$	$4 \times 8 =$	$5 \times 5 =$
$11 \times 6 =$	$12 \times 6 =$	$7 \times 3 =$	$7 \times 7 =$
$10 \times 8 =$	$10 \times 9 =$	$8 \times 5 =$	$9 \times 4 =$

1. 50 cts. is what part of a dollar?
2. 75 cts. is what part of a dollar?
3. 25 cts. is what part of a dollar?
4. 2 ft. is what part of a yard?
5. 18 inches is what part of a yard?
6. 1 pint is what part of a quart?
7. 2 gills is what part of a pint?
8. 3 gills is what part of a pint?
9. 2 quarts is what part of a gallon?
10. 3 quarts is what part of a gallon?
11. 6 things is what part of a dozen?
12. 9 things is what part of a dozen?
13. 4 quarts is what part of a peck?
14. 6 quarts is what part of a peck?
15. 2 pecks is what part of a bushel?
16. 3 pecks is what part of a bushel?
17. 8 ounces is what part of a pound?
18. 12 ounces is what part of a pound?
19. If 1 pound of sugar costs 6 cts., what will 7 pounds cost?
20. At 8 cts. a pound, what will 8 pounds of fruit cost?
21. At 9 cts. a pound, what will 5 pounds of meat cost?
22. At 7 cts. a quart, what will 8 quarts of fruit cost?
23. At 8 cts. a quart, what will 4 quarts of fruit cost?

1 × 9 =	49 ÷ 7 =	63 ÷ 7 =	9 ones =
2 × 9 =	48 ÷ 6 =	64 ÷ 8 =	9 twos =
3 × 9 =	42 ÷ 7 =	63 ÷ 9 =	9 threes =
4 × 9 =	48 ÷ 8 =	66 ÷ 6 =	9 fours =
5 × 9 =	45 ÷ 9 =	66 ÷ 11 =	9 fives =
6 × 9 =	50 ÷ 10 =	72 ÷ 8 =	9 sixes =
7 × 9 =	54 ÷ 6 =	72 ÷ 9 =	9 sevens =
8 × 9 =	56 ÷ 7 =	80 ÷ 10 =	9 eights =
8 × 10 =	54 ÷ 9 =	80 ÷ 8 =	9 tens =
8 × 11 =	56 ÷ 8 =	77 ÷ 7 =	9 elevens =
8 × 12 =	55 ÷ 5 =	77 ÷ 11 =	8 sixes =

MULTIPLY.

7	8	9	10	11	12	5	6	0	12
× 3	3	3	3	3	3	3	3	7	7
5	0	2	3	7	8	9	10	4	17
× 3	3	3	3	4	4	4	4	3	2
11	12	4	5	0	4	3	6	6	13
× 4	4	4	4	4	5	5	5	4	6
0	8	9	10	11	12	6	7	4	17
× 5	5	5	5	5	5	6	6	8	5
22	33	42	17	46	15	16	17	16	15
× 3	3	2	3	2	4	4	4	3	3

Recite the tables of 7's and 8's.

SUBTRACT.

70	70	70	70	70	70	71	71	71
63	65	64	66	68	70	2	4	3
71	71	71	71	71	71	71	71	71
5	6	8	7	9	12	14	15	13
71	71	71	71	71	71	71	71	71
16	18	17	19	22	24	23	25	27
71	71	71	71	71	71	71	71	71
26	29	28	32	34	33	35	38	36
71	71	71	71	71	71	71	71	71
39	37	42	45	43	46	44	49	47
71	71	71	71	71	71	71	71	71
48	54	53	52	56	55	57	59	58
71	71	71	71	71	71	71	71	71
62	64	63	65	67	66	69	68	71
72	72	72	72	72	72	72	72	72
3	5	4	6	8	7	9	14	13

$10 \times 9 =$	$7 \times 9 =$	$6 \times 9 =$	$11 \times 8 =$
$11 \times 9 =$	$8 \times 8 =$	$7 \times 8 =$	$12 \times 7 =$
$10 \times 8 =$	$3 \times 9 =$	$5 \times 9 =$	$10 \times 7 =$
$12 \times 7 =$	$5 \times 6 =$	$6 \times 9 =$	$9 \times 9 =$
$11 \times 8 =$	$9 \times 3 =$	$7 \times 9 =$	$8 \times 8 =$
$12 \times 6 =$	$9 \times 4 =$	$8 \times 9 =$	$7 \times 7 =$
$13 \times 3 =$	$9 \times 5 =$	$9 \times 7 =$	$6 \times 9 =$

ADD.

54	54	54	54	54	54	54	54	54
25	20	15	30	36	35	38	37	39
54	54	54	54	55	55	55	55	55
45	40	46	43	9	10	20	30	40
55	55	55	55	55	55	55	55	55
45	25	15	13	35	17	16	18	19
55	55	55	55	55	55	55	55	55
26	27	29	36	39	37	9	6	8
55	55	55	55	55	55	55	55	56
4	23	34	47	48	49	28	43	5
56	56	56	56	56	56	56	56	56
7	8	9	10	15	20	30	40	44
56	56	56	56	56	56	56	56	56
25	35	3	4	17	19	18	37	39
56	57	57	57	57	57	57	57	57
38	2	4	3	5	8	6	9	15
57	57	57	57	57	57	57	57	57
12	16	18	17	19	20	25	23	24
27	19	16	37	9	13	8	7	18
18	20	39	15	27	37	19	29	10
36	17	10	17	14	16	25	12	38
13	38	25	18	15	27	16	27	14

Recite the tables of 6's and 7's.

SUBTRACT.

72	72	72	72	72	72	72	72	72
15	17	16	18	23	19	24	26	25
72	72	72	72	72	72	72	72	72
27	29	28	33	35	34	37	39	38
72	72	72	72	72	72	72	72	72
43	45	44	49	47	48	53	55	54
72	72	72	72	72	72	72	72	72
57	59	58	63	65	64	67	69	68
73	73	73	73	73	73	73	73	73
4	6	5	7	8	14	9	15	18
73	73	73	73	73	73	73	73	73
16	19	24	25	27	29	26	28	34
73	73	73	73	73	73	73	73	73
36	35	37	39	38	44	46	45	48
73	73	74	74	74	74	74	74	74
47	49	5	7	9	8	6	15	17
74	74	74	74	74	74	74	74	74
18	25	19	26	28	29	35	37	38
74	74	74	74	74	74	74	74	74
45	39	46	48	47	55	49	56	58

Recite the table of 7's.

ADD.

57	57	57	57	57	57	57	57	57
26	28	29	35	30	40	56	33	32
57	57	57	57	57	58	58	58	58
34	37	38	42	43	2	1	3	5
58	58	58	58	58	58	58	58	58
4	6	9	7	12	14	16	13	15
58	58	58	58	58	58	58	58	58
17	19	18	20	22	25	24	23	26
58	58	58	58	58	58	58	58	58
28	27	29	30	32	31	21	41	34
58	58	58	58	58	58	58	58	58
33	35	36	38	37	39	41	40	42
59	59	59	59	59	59	59	59	59
1	3	2	4	6	5	7	9	8
59	59	59	59	59	59	59	59	59
12	11	15	14	13	16	18	17	19
46	19	27	42	56	22	13	27	18
27	37	14	36	10	39	27	18	35
15	18	49	19	17	26	48	29	17

Recite the tables of 3's, 4's, and 5's.

5 in 35 —— times.	6 in 42 —— times.
7 in 28 —— times.	8 in 48 —— times.
6 in 30 —— times.	7 in 42 —— times.
7 in 35 —— times.	6 in 48 —— times.
3 in 27 —— times.	7 in 49 —— times.
7 in 21 —— times.	10 in 50 —— times.
6 in 36 —— times.	9 in 54 —— times.
8 in 40 —— times.	6 in 54 —— times.

1. If it takes 6 yds. of calico for 1 dress, how many dresses can you make from 24 yds.?
2. How many pencils can John buy with 60 cts. if each pencil costs 2 cts.?
3. If 1 quart of fruit costs 8 cents, how many quarts can you get for 56 cents?
4. If 1 yd. of ribbon costs 5 cents, how many yds. can you get for 45 cents?
5. At 5 cts. each, 7 flags will cost —— cts.
6. At 9 cts. a pound, 4 pounds of meat will cost —— cts.
7. At 7 cts. a pound, 9 pounds of fruit will cost —— cts.
8. At 6 cts. each, 7 tops will cost —— cts.
9. At 8 cts. each, 8 books will cost —— cts.
10. At 10 cts. each, 7 slates will cost —— cts.
11. At 9 cts. each, 6 dolls will cost —— cts.
12. At 8 cts. each, 5 balls will cost —— cts.
13. At 5 cts. each, 9 pencils will cost —— cts.
14. At 10 cts. each, 7 books will cost —— cts.
15. At 12 cts. each, 6 flags will cost —— cts.

SUBTRACT.

74	74	74	74	74	75	75	75	75
59	66	65	68	69	6	8	7	9
75	75	75	75	75	75	75	75	75
16	18	17	19	26	27	29	28	36
75	75	75	75	75	75	75	75	75
37	39	46	48	47	49	56	57	58
75	75	75	75	75	76	76	76	76
59	66	68	67	69	7	8	17	19
76	76	76	76	76	76	76	76	76
18	27	29	28	37	39	38	47	49
76	76	76	76	76	76	76	77	77
48	57	59	58	67	69	68	8	9
77	77	77	77	77	77	77	77	77
18	29	28	38	39	48	58	49	59
77	77	78	78	78	78	78	78	78
68	69	9	19	29	39	49	59	69
79	79	79	79	79	79	79	79	80
70	75	73	72	64	47	60	33	1
80	80	80	80	80	80	80	80	80
3	2	4	6	5	7	8	9	10

Recite the tables of 2's, 7's, and 8's.

ADD.

59	59	59	59	59	59	59	59	59
25	23	22	26	28	21	30	29	32
59	59	59	59	59	59	59	59	60
34	36	35	37	39	38	40	41	10
60	60	60	60	60	60	61	61	61
15	20	30	40	25	35	9	20	30
61	62	62	62	62	62	62	62	62
39	8	9	17	19	18	34	38	37
63	63	63	63	63	63	63	63	63
14	10	20	30	37	17	25	18	29
63	63	63	63	63	64	64	64	64
27	36	24	26	33	8	7	9	6
64	64	64	64	64	64	64	64	64
15	17	19	18	20	25	27	28	29
64	64	64	65	65	65	65	65	65
26	36	35	4	3	7	9	8	16
65	65	65	65	65	65	65	65	65
18	17	19	20	27	26	28	30	29
36	41	30	12	17	37	55	20	30
9	18	28	36	15	26	15	20	30
20	19	15	18	20	10	9	20	30

Recite the tables of 6's, 7's, and 8's.

SUBTRACT.

80	80	80	80	80	80	80	80	80
12	11	16	15	17	19	18	22	24
80	80	80	80	80	80	80	80	80
34	36	42	56	40	50	75	60	78
80	80	80	80	80	80	80	81	81
77	43	37	80	70	20	30	2	4
81	81	81	81	81	81	81	81	81
3	5	7	6	8	12	9	13	15
81	81	81	81	81	81	81	81	81
14	11	16	17	19	18	22	24	23
81	81	81	81	81	81	81	81	81
25	27	26	28	32	29	33	35	32
81	81	81	81	81	81	81	81	81
36	39	37	43	42	44	46	45	47
81	81	81	81	81	81	81	81	81
52	48	54	49	53	55	57	59	58
81	81	81	81	81	81	81	81	81
62	65	64	66	69	68	67	72	75
81	81	81	81	81	81	81	81	82
73	74	77	76	79	78	80	81	3

Recite the table of 8's.

ADD.

65	66	66	66	66	66	66	66	66
35	7	9	8	10	17	19	18	27
66	66	66	66	67	67	67	67	67
28	29	30	34	8	10	9	28	33
67	68	68	68	68	68	68	68	68
29	4	15	14	5	7	6	9	10
68	68	68	68	68	68	68	68	68
17	19	16	18	20	26	25	27	29
68	68	68	69	69	69	69	69	69
28	30	32	3	5	4	7	6	8
69	69	69	69	69	69	69	69	69
17	19	18	20	30	25	31	26	28
69	70	70	70	70	70	71	71	71
27	10	20	30	5	25	10	20	29
72	72	72	72	73	73	73	73	73
8	28	18	17	7	9	20	25	27
74	74	74	74	74	74	74	75	75
6	17	19	18	25	26	20	25	19
75	75	75	75	76	76	76	76	76
17	18	8	9	4	7	9	8	10

Recite the tables of Dry Measure and U. S. Money.

SUBTRACT.

82	82	82	82	82	82	82	82	82
4	6	5	7	8	13	9	28	37
82	82	82	82	82	82	82	82	82
19	17	15	18	14	27	36	48	57
82	82	82	82	82	83	83	83	83
33	55	63	75	77	4	6	8	7
83	83	83	83	83	83	83	83	83
9	5	14	16	15	17	19	18	24
83	83	83	83	83	83	83	83	83
26	25	27	28	34	29	35	37	39
83	83	83	83	83	83	83	83	83
36	38	44	46	47	49	48	54	56
83	83	83	83	83	83	83	83	83
57	59	58	55	64	66	65	67	69
83	83	83	83	83	83	83	84	84
68	74	76	75	77	79	78	5	7
84	84	84	84	84	84	84	84	84
6	8	15	9	16	17	18	25	19
84	84	84	84	84	84	84	84	84
26	28	27	35	29	36	38	37	39

Recite the tables of 7's and 8's.

1. 5 is contained in 40 —— times.
2. 10 is contained in 50 —— times.
3. 7 is contained in 21 —— times.
4. 6 is contained in 18 —— times.
5. 8 is contained in 32 —— times.
6. 9 is contained in 36 —— times.
7. 5 is contained in 35 —— times.
8. 7 is contained in 42 —— times.
9. 8 is contained in 40 —— times.
10. What two numbers make 50?
11. What two numbers make 100?
12. What two numbers make 80?
13. 8 ounces is what part of a pound?
14. 2 pecks is what part of a bushel?
15. 4 quarts is what part of a peck?
16. 2 quarts is what part of a gallon?
17. 2 gills is what part of a pint?
18. 18 inches is what part of a yard?
19. 3 inches is what part of a foot?
20. 25 cts. is what part of a dollar?
21. 30 minutes is what part of an hour?
22. 15 minutes is what part of an hour?
23. 3 things is what part of a dozen?
24. 8 things is what part of a dozen?
25. If $\frac{1}{3}$ of a dollar is spent, what part of it is left?

$9 \times 1 =$	$12 \times 8 =$	$4 \times 8 =$	$21 \div 7 =$
$9 \times 2 =$	$11 \times 7 =$	$3 \times 7 =$	$18 \div 6 =$
$9 \times 3 =$	$11 \times 8 =$	$9 \times 2 =$	$48 \div 8 =$
$9 \times 4 =$	$10 \times 7 =$	$7 \times 5 =$	$54 \div 9 =$
$9 \times 5 =$	$12 \times 7 =$	$6 \times 8 =$	$54 \div 6 =$
$9 \times 6 =$	$10 \times 8 =$	$3 \times 4 =$	$35 \div 7 =$
$9 \times 7 =$	$5 \times 9 =$	$7 \times 7 =$	$36 \div 9 =$
$9 \times 8 =$	$4 \times 7 =$	$8 \times 9 =$	$27 \div 9 =$
$9 \times 9 =$	$3 \times 9 =$	$7 \times 8 =$	$27 \div 3 =$
$9 \times 10 =$	$6 \times 9 =$	$8 \times 8 =$	$28 \div 7 =$

ADD.

76	76	76	76	76	77	77	77	77	77
20	17	19	18	24	8	10	20	9	18
77	77	78	78	78	78	78	78	78	78
23	19	3	5	7	9	8	19	17	18
78	79	79	79	79	79	79	79	79	79
22	4	6	5	7	8	9	19	17	21
79	80	80	80	81	81	82	82	83	83
18	20	10	5	9	19	8	18	9	17
84	84	84	85	85	85	85	85	86	86
5	16	10	14	15	13	7	9	8	7
86	86	87	87	87	87	88	88	88	88
9	14	7	9	8	13	5	9	7	12

SUBTRACT.

84	84	84	84	84	84	84	84	84	84
45	47	46	48	49	55	57	56	58	65
84	84	84	84	84	84	84	84	84	85
59	66	67	69	68	75	79	78	80	6
85	85	85	85	85	85	85	85	85	85
7	9	8	16	19	17	26	28	27	29
85	85	85	85	85	85	85	85	85	85
36	38	37	39	46	48	49	47	56	58
85	85	85	85	85	85	85	85	86	86
57	68	66	67	69	77	76	79	8	7
86	86	86	86	86	86	86	86	86	86
9	18	17	19	27	28	29	38	37	39
86	86	86	86	86	86	86	86	86	86
47	49	48	57	59	58	67	68	69	77
86	86	87	87	87	87	87	87	87	87
79	78	8	9	18	19	28	29	38	39
87	87	87	87	87	87	87	87	88	88
48	49	58	59	68	69	78	79	9	19
88	88	88	88	88	88	89	89	89	89
29	39	49	59	69	79	15	17	16	19

Recite the table of Liquid Measure.

ADD.

89	89	89	89	89	89	89	90	90	90
1	7	6	8	5	9	11	10	5	9
91	92	93	94	95	96	97	98	99	80
9	8	7	6	5	4	3	2	1	20
40	50	30	50	40	30	75	45	64	20
30	20	70	50	40	30	25	15	25	80
28	14	17	26	9	18	13	38	19	15
29	20	9	18	30	45	28	12	25	39
40	39	46	39	26	19	35	26	38	27
30	40	50	35	24	15	14	16	17	18
30	40	50	35	24	15	14	16	17	18
30	20	0	20	24	15	14	16	17	18
25	19	40	17	55	75	80	19	34	26
17	43	10	16	10	10	10	26	34	26
16	18	20	29	28	10	10	45	27	26

MULTIPLY.

9	7	8	7	7	6	5	5	4	3	9	9
× 8	6	8	9	8	6	8	9	9	9	2	6
7	6	10	11	2	3	4	5	6	7	8	9
× 9	9	9	9	8	8	8	8	8	8	9	8
2	3	4	5	6	7	8	9	10	12	1	2
× 7	7	7	7	7	7	7	7	7	7	7	8
3	4	5	6	7	8	9	2	6	5	4	3
× 6	6	6	6	6	6	6	6	7	5	4	3
10	12	13	14	10	14	10	11	12	10		
× 2	3	2	2	3	4	5	6	7	8		

$8 \times 2 =$	$8 \times 5 =$	$40 \div 8 =$	$63 \div 9 =$
$3 \times 9 =$	$9 \times 8 =$	$56 \div 7 =$	$56 \div 8 =$
$4 \times 8 =$	$8 \times 7 =$	$64 \div 8 =$	$54 \div 9 =$
$7 \times 6 =$	$6 \times 9 =$	$72 \div 9 =$	$63 \div 7 =$
$9 \times 4 =$	$9 \times 7 =$	$72 \div 8 =$	$36 \div 6 =$
$5 \times 9 =$	$9 \times 6 =$	$80 \div 10 =$	$77 \div 11 =$
$7 \times 8 =$	$9 \times 10 =$	$88 \div 8 =$	$55 \div 5 =$
$9 \times 5 =$	$6 \times 7 =$	$96 \div 8 =$	$42 \div 7 =$

MULTIPLY.

12	12	12	12	12	12	12	11
× 3	4	5	6	7	8	2	5
11	7	8	9	10	10	10	10
× 6	7	5	6	7	5	6	7

1. What will 8 books cost at 7 cts. each?

2. Charles had 20 cts. and Fred $\frac{1}{4}$ as much; how many cts. had Fred?

3. A man worked 9 days for 3 dollars a day; how many dollars did he earn?

4. James earned 10 dollars; how much more must he earn before he will have 30 dollars?

5. At \$8 each, 9 hogs will cost \$——.

6. At \$10 each, 8 calves will cost ——.

7. At \$9 each, 7 sheep will cost ——.

SUBTRACT.

89	89	89	89	89	89	89	89	89	89
18	25	36	42	53	62	74	85	80	27
89	90	90	90	90	90	90	90	90	90
53	1	3	12	15	6	18	17	9	14
90	90	90	90	90	90	90	90	90	90
13	17	28	21	19	20	22	24	23	25
90	90	90	90	90	90	90	90	90	90
27	26	30	29	31	33	32	34	35	37
90	90	90	90	90	90	90	90	90	90
36	38	39	40	43	41	44	42	46	45
90	90	90	90	90	90	90	90	90	90
48	47	49	52	50	54	51	53	55	57
90	90	90	90	90	90	90	90	90	90
56	58	59	60	62	61	63	65	64	66
90	90	90	90	90	90	90	90	90	90
68	67	69	70	72	73	71	74	76	75
90	90	90	90	90	90	91	91	91	91
78	77	79	80	83	85	12	14	13	15

$12 \times 5 =$	$9 \times 7 =$	$8 \times 8 =$	$3 \times 9 =$
$9 \times 3 =$	$3 \times 10 =$	$7 \times 6 =$	$9 \times 5 =$
$10 \times 4 =$	$9 \times 4 =$	$4 \times 8 =$	$7 \times 9 =$

Count by 6's to 72. Count by 7's to 77.

1. At $7 each, 8 hogs will cost $——.
2. At $3 each, 12 chairs will cost $——.
3. At $10 each, 2 tables will cost $——.
4. At $9 each, 8 calves will cost $——.
5. If 1 dozen geese cost $7, what will 9 dozen cost?
6. If 1 pound of butter costs 12 cts., what will 6 pounds cost?
7. If 1 pound of sugar costs 9 cts., what will 5 pounds cost?
8. At 20 cts. a pound, what will 5 pounds of coffee cost?
9. At 5 cts. each, how much will 12 loaves of bread cost?
10. How much will 3 pounds of tea cost, at 30 cts. a pound?
11. How many 5-cent pieces and how many one-cent pieces make 39 cts.?
12. If 1 book costs 8 cts., how many books can I buy for 64 cts.?
13. A man had 79 sheep in a pen, and he sold 35; how many were left?
14. Mary has 48 cts. and Nell has 52 cts.; how much have both?
15. James has 3 pockets, and he has 7 marbles in each pocket; how many has he in all?

18 ÷ 9 =	30 ÷ 5 =	44 ÷ 11 =	8 × 8 =
25 ÷ 5 =	40 ÷ 8 =	26 ÷ 13 =	9 × 9 =
30 ÷ 6 =	40 ÷ 10 =	28 ÷ 14 =	7 × 7 =
20 ÷ 4 =	40 ÷ 5 =	50 ÷ 10 =	6 × 6 =
18 ÷ 6 =	40 ÷ 4 =	50 ÷ 25 =	7 × 9 =
20 ÷ 5 =	42 ÷ 7 =	50 ÷ 5 =	8 × 6 =
18 ÷ 3 =	45 ÷ 9 =	55 ÷ 11 =	.5 × 9 =
35 ÷ 7 =	22 ÷ 11 =	55 ÷ 5 =	9 × 4 =
36 ÷ 6 =	22 ÷ 2 =	26 ÷ 2 =	7 × 8 =
35 ÷ 5 =	33 ÷ 11 =	28 ÷ 2 =	6 × 7 =
30 ÷ 10 =	33 ÷ 3 =	36 ÷ 3 =	9 × 6 =
24 ÷ 6 =	44 ÷ 4 =	36 ÷ 2 =	10 × 9 =

SUBTRACT.

91	91	91	91	91	91	91	91	91	91
16	18	17	19	22	25	23	24	26	28
91	91	91	91	91	91	91	91	91	91
27	29	30	32	34	33	35	37	36	38
91	91	91	91	91	91	91	91	91	91
40	39	42	44	46	45	47	49	48	50
91	91	91	91	91	91	91	91	91	91
52	55	54	53	56	60	57	59	58	62
91	91	91	91	91	91	91	91	91	91
65	64	63	66	68	67	70	69	72	76
91	91	91	91	91	91	91	91	91	91
73	77	74	78	79	80	83	85	86	84

Recite the table of 8's.

SUBTRACT.

91	91	91	91	92	92	92	92	92	92
88	87	89	90	3	4	7	5	8	6
92	92	92	92	92	92	92	92	92	92
13	9	27	30	40	45	35	50	55	60
92	92	92	92	92	92	92	93	93	93
65	70	75	80	87	85	90	4	16	15
93	93	93	93	93	93	93	93	93	93
17	19	18	40	29	45	30	55	50	60
93	93	93	93	93	93	93	94	94	94
70	65	68	76	80	87	90	15	17	16
94	94	94	94	94	94	94	94	94	94
18	25	26	28	19	36	39	37	38	40
95	95	95	95	95	95	95	95	95	95
7	18	39	40	67	48	56	55	79	87
95	95	95	95	95	95	95	95	95	96
78	80	76	87	86	89	88	90	95	7
96	96	96	96	96	96	96	96	96	96
8	17	9	18	19	27	29	28	37	30
96	96	96	96	96	96	96	96	96	96
38	39	40	47	49	48	50	57	59	58

Count by 8's to 64. Count by 9's to 72.

MULTIPLY.

11	12	10	11	10	13	14	15	20	25
× 8	7	8	9	9	2	3	4	4	2
16	17	18	19	19	20	40	30	33	34
× 2	3	3	2	3	3	2	2	3	2
12	12	12	12	12	12	11	11	11	11
× 4	5	6	7	8	3	6	7	5	4
13	13	13	13	13	13	13	14	14	14
× 3	4	5	6	7	8	9	3	4	5
14	14	15	15	15	15	16	16	16	16
× 6	7	3	4	5	6	3	4	5	6

SUBTRACT.

96	96	96	96	96	96	96	96	96	96
55	60	67	68	69	77	70	75	79	78
96	96	96	96	96	96	97	97	97	97
87	80	88	85	89	90	8	9	18	19
97	97	97	97	97	97	97	97	97	97
20	25	28	29	30	39	38	35	49	45
97	97	97	97	97	97	97	97	97	97
48	50	59	55	58	69	60	68	70	75
97	97	97	97	97	97	97	98	98	98
78	79	80	85	89	88	90	9	19	29

1. At 10 cts. a pint, what will 7 pints of cream cost?

2. If 1 quart of fruit costs 9 cts., what will 8 quarts cost?

3. At 20 cts. a peck, what will 1 bushel of apples cost?

4. At 10 cts. a quart, what will 1 gallon of syrup cost?

5. At 8 cts. a pound, how much will 7 pounds of fruit cost?

6. At 10 cts. a pound, how much will 8 ounces of butter cost?

7. If 1 pound of tea costs 80 cts., what will a half-pound cost?

8. How many ounces in a half-pound?

9. How many ounces in a quarter of a pound?

10. At 30 cts. a pound, how much will 3 pounds of coffee cost?

11. If 1 yd. of calico costs 6 cts., what will 9 yds. cost?

12. If 1 yd. of dress goods costs 9 cts., what will 10 yds. cost?

13. If 1 yd. of goods costs 8 cts., how many yds. can I buy for 63 cts.?

14. How many ounces in $\frac{3}{4}$ of a pound?

ADD.

40	25	16	33	44	47	56	22	16
30	37	27	18	36	13	28	33	38
20	12	43	26	19	18	13	19	14
32	16	19	48	17	14	34	56	28
17	28	26	16	18	29	26	14	23
19	37	40	23	19	13	15	18	35
19	34	17	15	36	49	25	26	33
35	16	29	27	14	17	37	18	29
27	39	26	39	38	26	19	37	24

MULTIPLY.

2	3	4	5	6	7	8	9	10	11
× 9	9	9	9	9	9	9	9	9	9
2	3	4	5	6	7	8	9	10	11
× 8	8	8	8	8	8	8	8	8	8
3	4	5	6	7	8	9	10	11	12
× 7	7	7	7	7	7	7	7	7	8
9	13	7	8	9	5	9	9	9	12
× 6	3	6	6	6	6	4	5	7	7
3	4	5	6	7	8	9	10	11	12
× 5	5	5	5	5	5	5	5	5	5
2	3	5	6	7	8	9	10	11	12
× 4	4	4	4	4	4	4	4	4	4
3	4	5	6	7	8	9	10	11	12
× 3	3	3	3	3	3	3	3	3	3

8 × 1 =	9 × 1 =	7 × 1 =	6 × 1 =
8 × 2 =	9 × 2 =	7 × 2 =	6 × 2 =
8 × 3 =	9 × 3 =	7 × 3 =	6 × 3 =
8 × 4 =	9 × 4 =	7 × 4 =	6 × 4 =
8 × 5 =	9 × 5 =	7 × 5 =	6 × 5 =
8 × 6 =	9 × 6 =	7 × 6 =	6 × 6 =
8 × 7 =	9 × 7 =	7 × 7 =	6 × 7 =
8 × 8 =	9 × 8 =	7 × 8 =	6 × 8 =
8 × 9 =	9 × 9 =	7 × 9 =	6 × 9 =
8 × 10 =	9 × 10 =	7 × 10 =	6 × 10 =
8 × 11 =	9 × 11 =	7 × 11 =	6 × 11 =
8 × 12 =	10 × 9 =	7 × 12 =	6 × 12 =

40 ÷ 5 =	55 ÷ 5 =	72 ÷ 9 =	44 ÷ 11 =
42 ÷ 7 =	56 ÷ 7 =	70 ÷ 10 =	88 ÷ 11 =
48 ÷ 6 =	60 ÷ 5 =	72 ÷ 8 =	88 ÷ 8 =
44 ÷ 4 =	56 ÷ 8 =	70 ÷ 7 =	90 ÷ 10 =
40 ÷ 10 =	60 ÷ 12 =	77 ÷ 11 =	90 ÷ 9 =
44 ÷ 11 =	63 ÷ 9 =	60 ÷ 30 =	35 ÷ 7 =
49 ÷ 7 =	64 ÷ 8 =	77 ÷ 7 =	42 ÷ 6 =
50 ÷ 10 =	63 ÷ 7 =	72 ÷ 6 =	21 ÷ 7 =
54 ÷ 9 =	60 ÷ 6 =	72 ÷ 12 =	36 ÷ 6 =
50 ÷ 5 =	66 ÷ 11 =	80 ÷ 8 =	48 ÷ 8 =
54 ÷ 6 =	60 ÷ 10 =	80 ÷ 10 =	35 ÷ 5 =
55 ÷ 11 =	66 ÷ 6 =	54 ÷ 9 =	40 ÷ 8 =

Recite the Time table.

1. $\frac{1}{4}$ of 20 apples are —— apples.
2. $\frac{1}{4}$ of 24 blocks are —— blocks.
3. $\frac{1}{3}$ of 15 chairs are —— chairs.
4. $\frac{1}{3}$ of 30 ducks are —— ducks.
5. $\frac{1}{2}$ of 50 sheep are —— sheep.
6. $\frac{1}{2}$ of 80 hens are —— hens.
7. $\frac{2}{3}$ of 15 books are —— books.
8. $\frac{2}{3}$ of 18 marbles are —— marbles.
9. $\frac{2}{3}$ of 24 balls are —— balls.
10. $\frac{2}{3}$ of 30 tops are —— tops.

$13 \div 13 =$	$50 \div 10 =$	$9 \times 7 =$	$54 \div 9 =$
$45 \div 15 =$	$60 \div 30 =$	$9 \times 8 =$	$48 \div 8 =$
$34 \div 17 =$	$60 \div 15 =$	$9 \times 9 =$	$36 \div 6 =$
$36 \div 18 =$	$60 \div 10 =$	$9 \times 10 =$	$24 \div 8 =$
$32 \div 16 =$	$48 \div 12 =$	$9 \times 11 =$	$40 \div 8 =$
$42 \div 14 =$	$54 \div 18 =$	$9 \times 12 =$	$42 \div 7 =$
$39 \div 13 =$	$57 \div 19 =$	$8 \times 12 =$	$35 \div 7 =$
$48 \div 16 =$	$52 \div 13 =$	$8 \times 11 =$	$49 \div 7 =$

SUBTRACT.

98	98	98	98	98	98	98	98	98	98
39	40	49	45	50	55	59	60	65	69
98	98	98	98	98	98	98	98	99	99
70	75	79	80	85	89	90	95	38	99

1. What two numbers make 60?
2. What two numbers make 80?
3. In 15 there are how many threes?
4. In 36 there are how many sixes?
5. In 72 there are how many eights?
6. How many two-cent stamps can you buy for 40 cts.?
7. How many bushels are in 16 pecks?
8. At 6 cts. each, how many books can be bought for 48 cts.?
9. At 5 cts. each, how many tops can be bought for 35 cts.?
10. At 25 cts. a bushel, how many bushels of corn can be bought for 2 dollars?
11. At 20 cts. a bushel, how many bushels of potatoes can be bought for $1?
12. 1 dollar less $\frac{1}{3}$ of a dollar is what part of a dollar?
13. John had 1 dollar and he gave his brother $\frac{2}{3}$ of it; how much had he left?
14. Nell had an apple and she gave $\frac{1}{4}$ to May and $\frac{1}{4}$ to Ann and $\frac{1}{4}$ to Edith; how much had she left for herself?
15. 1 dollar less $\frac{3}{4}$ of a dollar is what part of a dollar?
16. What two numbers make 90?

SUBTRACT.

100	100	100	100	100	100	100	100
1	3	4	2	6	8	7	9
100	100	100	100	100	100	100	100
12	11	13	15	18	17	19	20
100	100	100	100	100	100	100	100
25	22	21	26	29	30	27	32
100	100	100	100	100	100	100	100
35	31	36	37	38	34	39	40
100	100	100	100	100	100	100	100
42	45	41	43	47	46	48	49
100	100	100	100	100	100	100	100
50	52	55	54	53	58	57	51

$7 \times 6 =$	$13 \times 2 =$	$40 \times 2 =$	$\frac{1}{2}$ of $20 =$
$8 \times 3 =$	$13 \times 3 =$	$20 \times 2 =$	$\frac{1}{2}$ of $40 =$
$9 \times 4 =$	$14 \times 2 =$	$30 \times 2 =$	$\frac{1}{2}$ of $50 =$
$3 \times 9 =$	$15 \times 2 =$	$15 \times 3 =$	$\frac{1}{4}$ of $12 =$
$7 \times 7 =$	$12 \times 7 =$	$20 \times 3 =$	$\frac{1}{4}$ of $24 =$
$8 \times 8 =$	$12 \times 8 =$	$20 \times 4 =$	$\frac{1}{4}$ of $16 =$
$9 \times 9 =$	$12 \times 5 =$	$25 \times 2 =$	$\frac{1}{4}$ of $40 =$
$6 \times 6 =$	$12 \times 6 =$	$50 \times 2 =$	$\frac{1}{3}$ of $15 =$
$9 \times 11 =$	$13 \times 4 =$	$22 \times 3 =$	$\frac{1}{3}$ of $24 =$
$7 \times 9 =$	$12 \times 4 =$	$24 \times 2 =$	$\frac{1}{3}$ of $18 =$
$4 \times 8 =$	$11 \times 9 =$	$23 \times 2 =$	$\frac{1}{3}$ of $21 =$
$4 \times 9 =$	$10 \times 9 =$	$21 \times 3 =$	$\frac{1}{3}$ of $27 =$

1. What will 2 cows cost at $25 each?

2. What would 9 calves cost at $8 each?

3. If 64 cookies were divided equally among 8 boys, how many would each receive?

4. If Mr. Brown paid $48 for one cow and $55 for another, how much did both cost him?

5. If 56 oranges were divided equally among 7 girls, how many would each get?

6. Mr. Smith had 85 hogs and he sold 29; how many had he left?

7. At 9 cts. a yd., what will 8 yds. of ribbon cost?

8. How much will 9 barrels of apples cost, at $3 a barrel?

9. James had 15 sticks of candy and he gave Tom $\frac{2}{3}$ of them; how many sticks had he left?

10. Mary had 18 paper dolls and she gave Edith $\frac{1}{3}$ of them; how many had she left?

SUBTRACT.

100	100	100	110	100	100	100	100
76	77	79	78	80	84	81	83
100	100	100	100	100	100	100	100
85	87	86	88	89	91	90	92
100	100	100	100	100	100	100	100
94	93	95	97	96	99	98	100

ADD.

17	22	45	26	7	8	27	39	16
19	17	12	17	49	35	9	13	29
18	33	29	28	13	20	38	26	20
32	14	7	9	16	16	41	14	17
16	27	9	37	19	48	6	17	18
14	16	23	13	27	10	29	9	25
15	9	17	9	3	7	13	22	14
13	18	13	14	12	14	46	30	16
22	7	21	12	13	15	4	6	10
12	14	13	10	17	16	15	18	19
19	28	10	15	16	14	17	14	10
13	17	18	29	19	10	18	16	17
24	16	37	16	15	17	10	20	15
26	20	22	14	26	29	25	19	26

Count by 6's to 96. Count by 7's to 84.

$9 \times 1 =$	$8 \times 9 =$	$64 \div 16 =$	$78 \div 13 =$
$9 \times 2 =$	$7 \times 8 =$	$68 \div 17 =$	$65 \div 13 =$
$9 \times 3 =$	$6 \times 7 =$	$72 \div 18 =$	$70 \div 14 =$
$9 \times 4 =$	$8 \times 8 =$	$75 \div 15 =$	$32 \div 16 =$
$9 \times 5 =$	$6 \times 9 =$	$70 \div 10 =$	$51 \div 17 =$
$9 \times 6 =$	$4 \times 8 =$	$77 \div 11 =$	$48 \div 16 =$
$9 \times 7 =$	$7 \times 5 =$	$80 \div 16 =$	$76 \div 19 =$
$9 \times 8 =$	$8 \times 5 =$	$52 \div 13 =$	$80 \div 20 =$
$9 \times 9 =$	$7 \times 6 =$	$76 \div 19 =$	$80 \div 40 =$
$9 \times 10 =$	$5 \times 9 =$	$54 \div 18 =$	$57 \div 19 =$
$9 \times 11 =$	$7 \times 9 =$	$39 \div 13 =$	$36 \div 18 =$
$9 \times 12 =$	$4 \times 9 =$	$42 \div 14 =$	$60 \div 15 =$

Recite the tables of 7's and 8's.

1. 6 is contained in 36 —— times.
2. 8 is contained in 40 —— times.
3. 9 is contained in 36 —— times.
4. 3 is contained in 21 —— times.
5. 8 is contained in 24 —— times.
6. 9 is contained in 27 —— times.
7. 3 is contained in 24 —— times.
8. 7 is contained in 42 —— times.
9. 3 is contained in 27 —— times.
10. 4 is contained in 44 —— times.
11. How many yards in 36 feet?
12. How many dimes in 1 dollar?
13. How many gills in 2 pints?
14. How many pints in 4 quarts?
15. How many quarts in 3 pecks?
16. How many pecks in 5 bushels?
17. How many days in 4 weeks?
18. How many weeks in 1 year?
19. How many wheels have 9 wagons?
20. If a boy earns $5 a week, how long will it take him to earn 45 dollars?
21. Dan had 60 hens and he sold 3 dozen; how many did he have left?
22. At 5 cts. a pound, how many pounds of sugar can I buy for 40 cents?
23. At 8 cts. a dozen, how many dozen eggs can I buy for 56 cts.?

$1 \times 9 =$	$7 \times 9 =$	$44 \div 4 =$	$70 \div 7 =$
$2 \times 9 =$	$6 \times 8 =$	$72 \div 9 =$	$66 \div 6 =$
$3 \times 9 =$	$9 \times 6 =$	$63 \div 7 =$	$49 \div 7 =$
$4 \times 9 =$	$8 \times 9 =$	$54 \div 9 =$	$27 \div 9 =$
$5 \times 9 =$	$7 \times 8 =$	$56 \div 8 =$	$80 \div 8 =$
$6 \times 9 =$	$9 \times 7 =$	$63 \div 9 =$	$81 \div 9 =$
$7 \times 9 =$	$7 \times 5 =$	$64 \div 8 =$	$90 \div 9 =$
$8 \times 9 =$	$6 \times 7 =$	$56 \div 7 =$	$88 \div 8 =$
$9 \times 9 =$	$8 \times 6 =$	$40 \div 8 =$	$36 \div 9 =$
$10 \times 9 =$	$9 \times 8 =$	$72 \div 8 =$	$28 \div 7 =$
$11 \times 9 =$	$7 \times 7 =$	$50 \div 5 =$	$30 \div 6 =$
$12 \times 9 =$	$8 \times 8 =$	$60 \div 6 =$	$99 \div 9 =$

MULTIPLY.

12	11	10	11	12	12	11	12	9	7
8	9	8	7	7	6	5	9	8	9
40	30	13	14	15	14	15	13	9	8
2	3	3	2	2	3	3	4	7	7
14	15	16	17	18	19	20	21	6	8
4	4	4	4	4	4	4	4	9	8
13	14	15	13	14	22	22	22	9	7
6	6	6	7	7	2	3	4	9	8
23	24	24	25	26	27	28	29	5	6
3	3	2	2	2	2	2	2	5	6
30	31	32	33	34	35	36	37	8	5
2	2	2	2	2	2	2	2	5	9
38	39	41	42	43	44	45	46	7	6
2	2	2	2	2	2	2	2	6	8

6 is contained in 15 — times and — over.
8 is contained in 18 — times and — over.
6 is contained in 20 — times and — over.
3 is contained in 16 — times and — over.
4 is contained in 18 — times and — over.
5 is contained in 24 — times and — over.
5 is contained in 21 — times and — over.
7 is contained in 24 — times and — over.

I have 72 apples, and if I divide them equally among 9 boys how many will each boy get?

Ann spent 59 cts. and Grace 38 cts.; how much did both spend?

MULTIPLICATION TABLE.

1 × 1 = 1	2 × 1 = 2	3 × 1 = 3	4 × 1 = 4
1 × 2 = 2	2 × 2 = 4	3 × 2 = 6	4 × 2 = 8
1 × 3 = 3	2 × 3 = 6	3 × 3 = 9	4 × 3 = 12
1 × 4 = 4	2 × 4 = 8	3 × 4 = 12	4 × 4 = 16
1 × 5 = 5	2 × 5 = 10	3 × 5 = 15	4 × 5 = 20
1 × 6 = 6	2 × 6 = 12	3 × 6 = 18	4 × 6 = 24
1 × 7 = 7	2 × 7 = 14	3 × 7 = 21	4 × 7 = 28
1 × 8 = 8	2 × 8 = 16	3 × 8 = 24	4 × 8 = 32
1 × 9 = 9	2 × 9 = 18	3 × 9 = 27	4 × 9 = 36
1 × 10 = 10	2 × 10 = 20	3 × 10 = 30	4 × 10 = 40
1 × 11 = 11	2 × 11 = 22	3 × 11 = 33	4 × 11 = 44
1 × 12 = 12	2 × 12 = 24	3 × 12 = 36	4 × 12 = 48

5 × 1 = 5	6 × 1 = 6	7 × 1 = 7	8 × 1 = 8
5 × 2 = 10	6 × 2 = 12	7 × 2 = 14	8 × 2 = 16
5 × 3 = 15	6 × 3 = 18	7 × 3 = 21	8 × 3 = 24
5 × 4 = 20	6 × 4 = 24	7 × 4 = 28	8 × 4 = 32
5 × 5 = 25	6 × 5 = 30	7 × 5 = 35	8 × 5 = 40
5 × 6 = 30	6 × 6 = 36	7 × 6 = 42	8 × 6 = 48
5 × 7 = 35	6 × 7 = 42	7 × 7 = 49	8 × 7 = 56
5 × 8 = 40	6 × 8 = 48	7 × 8 = 56	8 × 8 = 64
5 × 9 = 45	6 × 9 = 54	7 × 9 = 63	8 × 9 = 72
5 × 10 = 50	6 × 10 = 60	7 × 10 = 70	8 × 10 = 80
5 × 11 = 55	6 × 11 = 66	7 × 11 = 77	8 × 11 = 88
5 × 12 = 60	6 × 12 = 72	7 × 12 = 84	8 × 12 = 96
9× 1= 9	10× 1= 10	11× 1= 11	12× 1= 12
9× 2= 18	10× 2= 20	11× 2= 22	12× 2= 24
9× 3= 27	10× 3= 30	11× 3= 33	12× 3= 36
9× 4= 36	10× 4= 40	11× 4= 44	12× 4= 48
9× 5= 45	10× 5= 50	11× 5= 55	12× 5= 60
9× 6= 54	10× 6= 60	11× 6= 66	12× 6= 72
9× 7= 63	10× 7= 70	11× 7= 77	12× 7= 84
9× 8= 72	10× 8= 80	11× 8= 88	12× 8= 96
9× 9= 81	10× 9= 90	11× 9= 99	12× 9=108
9×10= 90	10×10=100	11×10=110	12×10=120
9×11= 99	10×11=110	11×11=121	12×11=132
9×12=108	10×12=120	11×12=132	12×12=144

NOTE.—To be used when best suited to the needs of the class. The greater part of the table should be learned thoroughly while in this grade. Call attention to the fact that the table of 2's is the same as counting by 2's, and that the results are 2, 4, 6, 8, etc., down the table, and that the tables of 3's, 4's, etc., show the same results as if counting by those numbers. Let the children see that multiplication is only a shorter method of adding.

1. In one bunch there are $\frac{2}{3}$ of a dozen sticks, in another bunch there are $\frac{3}{4}$ of a dozen; how many more sticks in one bunch than in the other?

2. If 63 marbles were divided equally among 7 boys, how many would each receive?

3. Mr. Brown is 46 years old and his son is $\frac{1}{2}$ as old; how old is his son?

4. My father paid \$60 for a horse, \$28 for a cow, and \$12 for a calf; how much did he pay for all?

5. Mr. Smith bought a horse for \$75 and sold it for \$92; how much did he make?

6. In one basket there were 36 eggs, in another 28, in another 19, and in another 17; how many eggs in all the baskets?

7. Dan earns 65 cts. the first week and 95 cts. the second week; how much more does he earn the second week than the first week?

8. If 1 dozen eggs costs 12 cts., how many dozen can you buy for 96 cts.?

9. If a horse eats 1 peck of oats a day, how many bushels will he eat in 4 weeks?

10. At a dollar a bushel, how many pecks of grain can I buy for 75 cts.?

MULTIPLY.

47 × 2	48 × 2	16 × 3	17 × 3	18 × 3	19 × 3	20 × 3	21 × 3	22 × 3
23 × 3	24 × 3	25 × 3	26 × 3	27 × 3	28 × 3	29 × 3	30 × 3	31 × 3
32 × 3	33 × 3	22 × 4	23 × 4	24 × 4	25 × 4	13 × 5	14 × 5	15 × 5
16 × 5	17 × 5	18 × 5	19 × 5	20 × 5	13 × 6	14 × 6	15 × 6	16 × 6
13 × 7	14 × 7	15 × 7	12 × 8	12 × 9	11 × 9	10 × 9	12 × 7	11 × 7

9 ones =	8 × 1 =	5 × 9 =	96 ÷ 12 =
9 twos =	8 × 2 =	9 × 8 =	99 ÷ 11 =
9 threes =	8 × 3 =	6 × 9 =	90 ÷ 10 =
9 fours =	8 × 4 =	4 × 9 =	81 ÷ 9 =
9 fives =	8 × 5 =	9 × 3 =	72 ÷ 8 =
9 sixes =	8 × 6 =	9 × 9 =	60 ÷ 12 =
9 sevens =	8 × 7 =	2 × 9 =	99 ÷ 9 =
9 eights =	8 × 8 =	9 × 1 =	96 ÷ 8 =
9 nines =	8 × 9 =	10 × 9 =	63 ÷ 9 =
9 tens =	8 × 10 =	9 × 7 =	56 ÷ 8 =
9 elevens =	8 × 11 =	12 × 9 =	48 ÷ 12 =
9 twelves =	8 × 12 =	9 × 11 =	72 ÷ 12 =

1. Count by 8's to 64. Count by 9's to 81.

2. 7 is $\frac{1}{3}$ of what number? 20 is $\frac{1}{2}$ of what number?

3. What is $\frac{3}{4}$ of 24? $\frac{1}{2}$ of 80? $\frac{2}{3}$ of 9? $\frac{2}{4}$ of 20? $\frac{1}{4}$ of 40?

1. In 28 there are —— sevens.
2. In 32 there are —— eights.
3. In 40 there are —— eights.
4. In 42 there are —— sevens.
5. In 45 there are —— nines.
6. In 48 there are —— eights.
7. In 49 there are —— sevens.
8. In 50 there are —— tens.
9. Show $\frac{1}{2}$ of 2, 4, 6, 8, 10, 12, 16, 20, 24.
10. How can we find one-half of a number?
11. Show $\frac{1}{3}$ of 3, 6, 9, 12, 15, 18, 21, 24, 27.
12. How can we find one-third of a number?
13. Show $\frac{1}{4}$ of 4, 8, 12, 16, 20, 24, 28.
14. How can we find $\frac{1}{4}$ of a number?
15. Which is the more, $\frac{1}{2}$ or $\frac{1}{4}$? $\frac{1}{2}$ or $\frac{2}{4}$? $\frac{1}{2}$ or $\frac{1}{3}$? $\frac{1}{2}$ or $\frac{2}{3}$? $\frac{3}{4}$ or $\frac{2}{3}$?
16. How much money is needed to pay the postage on 8 letters?
17. What would 9 postal cards cost?
18. 19 is how many more than 9?
19. 28 is how many more than 8?
20. At 80 cts. a bushel, what will 1 peck of corn cost?

NOTE.—Answer to No. 10: To find one-half of a number, divide by 2 or separate the number into two equal parts. Illustrate No. 15 by objects.

1. What is $\frac{1}{5}$ of 5? $\frac{1}{5}$ of 10? $\frac{1}{5}$ of 15? $\frac{1}{5}$ of 20? $\frac{1}{5}$ of 30?
2. What is $\frac{1}{6}$ of 6? $\frac{1}{6}$ of 12? $\frac{1}{6}$ of 18? $\frac{1}{6}$ of 24? $\frac{1}{6}$ of 36?
3. What is $\frac{1}{7}$ of 7? $\frac{1}{7}$ of 14? $\frac{1}{7}$ of 21? $\frac{1}{7}$ of 28? $\frac{1}{7}$ of 35?
4. What is $\frac{1}{8}$ of 8? $\frac{1}{8}$ of 16? $\frac{1}{8}$ of 24? $\frac{1}{8}$ of 32? $\frac{1}{8}$ of 40?
5. In $\frac{1}{2}$ of a year there are —— months.
6. In $\frac{1}{3}$ of a year there are —— months.
7. In $\frac{1}{4}$ of a year there are —— months.
8. In 54 there are —— nines.
9. In 55 there are —— fives.
10. In 60 there are —— twelves.
11. In 56 there are —— eights.
12. In 63 there are —— nines.
13. In 64 there are —— eights.
14. Mr. Black sold 60 dollars' worth of corn and took his pay in sheep at $5 each; how many sheep did he get?
15. Our flagpole is 36 feet high; how many yards high is it?
16. John earns $5 a week; how long will it take him to earn $45?
17. Grace is 8 years old and her aunt is 6 times as old; how old is her aunt?
18. How many school days in 7 weeks?
19. How many work days in 8 weeks?
20. At $6 each, how many hogs can be bought for $45, and how many dollars will be left over?

LESSON XLV.

A **Unit** is *one* thing of any kind, as *one apple, one dollar, one pound.*

Ten *units* make one **Ten.**

Ten *tens* make one **Hundred.**

When a figure stands alone it denotes **Units.**

Thus: 2 denotes two units, or 2 *ones.*
3 denotes three units, or 3 *ones.*

When a figure stands at the left of units it denotes **Tens.**

Thus: In 46 the 4 denotes tens and the 6 denotes units. Hence, 46 = 4 tens and 6 units.

When a figure stands at the left of tens it denotes **Hundreds.**

Thus: In 246 the 2 denotes hundreds, the 4 tens, and the 6 units. Hence, 246 = 2 hundreds, 4 tens, and 6 units.

1. Write one hundred, two hundred, four hundred, five hundred twenty-five.

2. Read 500, 700, 800, 246, 900, 336, 425.

3. Read by hundreds, tens, and units:

101	112	999	430	108	920	418	103	110	663
307	475	312	223	107	114	224	335	800	15

4. Write by figures:

Three hundreds, two tens, four units.
Two hundreds, four tens, six units.
Eight hundreds, five tens, three units.
Six hundreds, three tens, no units.
Five hundreds, no tens, seven units.

NOTE.—For illustrating, use bundles of sticks. Give much drill work from the blackboard in reading and writing numbers.

1. If 1 slate costs 20 cts., what will four slates cost?

Answer: 80 cts. If 1 slate costs 20 cts., 4 slates will cost 4 times 20 cts., or 80 cts.

2. John had 42 marbles and he divided them equally among 6 boys; how many did each boy get?

3. If 1 stamp costs 2 cts., how many stamps can I buy for 18 cts.?

Answer: 9 stamps. If 1 stamp costs 2 cts., I can buy as many as 2 is contained times in 18, or 9 stamps.

4. If cherries cost 80 cts. a peck, how much will 4 quarts cost?

5. At $1 a bushel, how much are 3 pecks of apples worth? 2 pecks? 1 peck?

6. A farmer sold 2 bushels of wheat for 80 cts.; at that price, how much did half a bushel cost?

7. Divide 99 by 9. 70 divided by 14 = ___?

8. Divide 100 by 50. 52 divided by 13 = ___?

9. Divide 36 by 18. 76 divided by 19 = ___?

10. Write in the Roman Notation:

13	27	19	60	50	18	69	43	14
26	45	24	38	40	23	48	65	21
17	39	37	47	30	55	32	44	16

11. 10 is $\frac{1}{4}$ of ___? 15 is $\frac{1}{3}$ of ___? 25 is $\frac{1}{4}$ of ___?

12. If anything is divided into two equal parts, each part is called one-___?

13. If anything is divided into three equal parts, each part is called one-___?

If anything is divided into four equal parts, each part is called one-—?

If anything is divided into five equal parts, each part is called one-—?

If anything is divided into six equal parts, each part is called one-—?

ADD.

100	333	162	764	154	120	745
100	224	325	235	345	359	243
766	468	475	483	761	535	325
233	431	523	515	228	464	400

54	55	75	85	37	78	87	90
92	62	50	76	96	35	29	25

SUBTRACT.

999	478	497	896	879	547	720
800	321	243	573	342	235	310
879	420	530	763	675	736	889
624	217	215	429	327	429	234

NOTE.—Addition and Subtraction beyond 100 are not difficult when the previous work has been thoroughly learned. Such work as above gives not only drill in addition and subtraction, but also in reading and writing numbers. Give as much more such work as time will permit. Review all the tables given in the book, and give work to illustrate. Give as much more work as the pupils are able to take, for any book can only be used as a general guide, some being able to take more and some less in the year's time.

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